# ORGANIZATION
# OF
# VOCATIONAL GUIDANCE

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# ORGANIZATION
# OF
# VOCATIONAL GUIDANCE

A Companion Volume to
Administration of Vocational Education.

BY

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TO

DR. FRANK PARSONS, PH. D.
Boston, Mass.
1854..........1908

MR. ELI W. WEAVER, PD. M.
Brooklyn, N. Y.
1862..........1922

PIONEERS AND LEADERS

IN

VOCATIONAL GUIDANCE IN THE UNITED STATES

# PREFACE

Vocational guidance in many of its aspects is still in the experimental stage, but in some of its phases a body of material has been developed, along with a technique and methods for using it, which enables us to step forward with a reasonable degree of assurance that we are at last able to contribute something of a definite character to the solution of the pressing problem of placing young people in those lines of endeavor in which there are for them greater possibilities of service and individual happiness.

The material in this book is the result of wide reading in the literature of guidance, and study under the acknowledged leaders in the field of guidance, and, above all, of practical experience in the establishment of guidance systems in schools, orphan asylums, settlement houses, and in the conduct of university classes in guidance.

This book was written with several groups of possible readers in mind. These are: (1) superintendents of school systems, (2) principals of the wide variety of public schools, (3) directors of vocational guidance systems, (4) advisors and counselors in all sorts of schools and classes, (5) deans of women in high schools and colleges, (6) Y. M. C. A. and Y. W. C. A. placement and employment secretaries and advisers, and (7) personnel workers and advisers in settlement houses, orphan asylums, and reform schools. We believe, also, that employment managers in stores, offices, and factories will find much of value in its pages.

To Dr. David Snedden of Columbia University, who has read portions of the manuscript, to Dr. John M. Brewer, of Harvard University, and to Mr. Meyer Bloomfield, Boston, the author is indebted for many suggestions and much inspiration.

ARTHUR FRANK PAYNE.

TEACHERS COLLEGE, COLUMBIA UNIVERSITY
NEW YORK CITY

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# THE ORGANIZATION OF VOCATIONAL GUIDANCE

## CHAPTER I

## THE FUNDAMENTAL CAUSES FOR THE DEVELOPMENT OF VOCATIONAL GUIDANCE IN OUR EDUCATIONAL SYSTEM

Vocational guidance of the scientific kind is a comparatively new movement in our civilization, and particularly in our public school system. It is always advisable for workers in, and students of, any new movement to search for the underlying causes that have brought about the development of that movement, so that they may adjust themselves and keep a proper balance—in this case—between the various proposals for the carrying out of the aims and the purposes of vocational guidance.

### THE NINE STAGES OF CIVILIZATION[1]

Our present civilization has developed through a fairly well-defined series of stages. Although there has been and is now much overlapping of these stages, still it will help us to clarify the situation if we study them. These stages are as follows:

1. **The primitive stage,** where the wants of man were few, and his ability to satisfy those wants were limited. These wants rarely exceeded the bare necessities of food, shelter, clothing, and protection.

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[1] See Marshall, L. C., *The Story of Human Progress*, The Macmillan Company, New York, 1923. Seignabos, C., *History of Ancient Civilization*, Charles Scribner's Sons, New York, 1910. Wells, L. R., *Industrial History of the United States*, The Macmillan Company, New York, 1922. Cowdrick, E. S., *Industrial History of the United States*, The Ronald Press Company, New York, 1923. Gibbins, H., *Industrial History of England*, Methuen and Company, London, 1920. Wells, H. G., *Outline of History*, Parts I, II, The Macmillan Company, New York, 1921. Usher, A. P., *An Introduction to the Industrial History of England*, Houghton Mifflin Company, New York, 1920.

**2. The Hunting and Fishing Stage.**—Here man had developed to the point where he was assuming control of certain elements of the natural world. He had developed certain tools, appliances, and weapons, such as traps, nets, bows and arrows, and spears for the capture of wild animals for the satisfaction of his wants as regards food and clothing.

**3. The pastoral stage,** in which man had domesticated some of the wild animals and was beginning to use them as beasts of burden, as well as for the satisfaction of his wants in food and clothing. Man at this time was still a nomad and a wanderer on the face of the earth. He had no fixed abode; he was able to live only in warm climates; his wealth was measured largely in terms of his animal possessions.

**4. The Agricultural Stage.**—In this stage man had made the great advance of domesticating wild fruits and vegetables. This was of the utmost significance, because it compelled man to establish a definite abode and developed the first idea of the ownership of land.

**5. The Handicraft and Domestic System.**—Along with these developments a series of inventions in tools, appliances, utensils, and mechanical devices had been developing. The first specialization begins here. The handicraft worker arose, who specialized and was distinguished from the agricultural worker. Each exchanged his products for the products of the other. These handicrafts were practiced in the home and were frequently performed by all members of the family.

**6. The Guild System of Labor.**—At this stage the handicrafts had developed to the point where a long period of training was necessary for the acquirement of the skills required to perform the complicated and difficult operations necessary for the production of goods to satisfy the wants of the consumers. This system was the old form of apprenticeship. The apprentice in time naturally became a journeyman, the journeyman became a master, the master became the merchant. Some of our modern terminology is a carry-over from this period. The individual tailor, with a little shop of his own, making goods only on individual order to measure, calls himself a "merchant tailor" or a "custom tailor."

**7. The Simple Factory System.**—Here we see the first development of organized quantity production for the open market: the first beginnings of the break-up of the old crafts and trades into specialized occupations; the use of semi-skilled workers, who were skilled only in one portion of a craft or trade; the entrance into the field of the "entrepreneur," risk taker, or capitalist. Here we also find the beginnings of the wage system, and the breakdown of the feudal system of labor.

**8. The Power-machine Factory System.**—The first melting of iron by Dud Dudley in 1619, the later development of coke, blast furnaces, puddling furnaces, grooved rolls, the invention of the steam engine by Newcomen, and its later improvement by James Watts, making it possible to cast iron machinery and to run that machinery by steam—all brought about the development of the power-machine factory system with its great advantages, benefits, disadvantages, and evils.

**9. The Modern Scientific-machine Factory Organization.**—The attention of producers up to 25 years ago had been absorbed by the problems of: first, production; second, distribution. With the partial solution of these major problems a new problem has arisen which may be designated as the problem of personnel. Employers, governments, and the thinkers and leaders of our present civilization are thinking today in terms of people more than ever before.

The most modern device in the organization of industry and business is that of scientific management. Scientific management is founded upon the so-called four B's. These are:[2]

(*a*) *There is One Best Way to Do Anything.*—In this field we have time study, motion study, routing and scheduling, planning boards, jigs, fixtures, and numerous other devices.

(*b*) *There is One Best Person to Do That Thing.*—Here we get the whole idea of the right person on the right job, getting the round peg in the round hole. This has brought about the development of the personnel engineer, employment managers, labor managers, with the establishment of departments, such as personnel departments, employment managers' departments—all for the purpose of attaining two major ends: (1) greater efficiency in production, certainly a logical and laudable objective; (2) greater happiness of the worker, because he is engaged in that line of service which he can perform most easily and readily, and in which he can produce the best results with the least expenditure of effort. This movement toward the greater use of scientific method has been reflected in part by the development of vocational guidance in our public schools, and it is, therefore, necessary that the workers in this field keep in close and intimate touch with its developments in business and industry.

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[2] Taylor, F. W., *The Principles of Scientific Management*, Harper and Brothers, New York, 1911. Hoxie, R. F., *Scientific Management and Labor*, D. Appleton & Company, New York, 1915. Emerson, H., *Twelve Principles of Efficiency*, Engineering Magazine Company, New York, 1912.

(*c*) *There is one best method of training* that best person to do that thing in that best way. Here we get the whole field of specific vocational education not only in our public schools, colleges, and universities, but also in training departments, vestibule schools, threshold schools, corporation schools, etc., in our industries, stores, and offices.

(*d*) *There is one best way to motivate* that best person to do that thing in that best way. Here we get the development of bonus systems, profit-sharing plans, collective bargaining, plant unions, scientific wage-payment systems, welfare systems, employee papers, employee stores, etc.

It is quite true that scientific management has not been an unqualified success in all cases where it has been tried, because in few places have all the four B's been put into effect at one and the same time. This might also be said of our vocational guidance systems in our public schools. At present much the largest proportion of the so-called guidance in our public schools consists of placement.

Another great change in industry and in business has been the development of new types of organizations.[3]

The *oldest* type of organization is the patriarchal. This type is fast disappearing and is now found only in small enterprises which are run personally by the owner, who keeps all authority and attends to all the details in all branches.

The *second* type is known as the "line organization." This form is a direct outgrowth of the necessity for discipline and obedience to orders wherever large numbers of employees are concerned. It is taken almost intact from the old form of military organization, each person in the line being directly responsible for all phases of the work below him, exactly as are the captains, the lieutenants and the sergeants of our military organizations.

The *third* type is known as the "line and staff." Just as our military organizations developed headquarter staffs and regimental staffs, so in the field of business and factory organization do we find a staff of experts and specialists who collect data, form judgments, and make recommendations to the general manager, who may accept the recommendations and issue necessary orders through the line organization.

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[3] See chap. xiv.

The *fourth* type is the functional organization. In this type the authority of the staff is no longer limited to giving advice to the chiefs. Their authority is extended to cover all phases of their speciality or function in all parts of the organization. Each of these experts has entire charge of a certain type of activity or function in the entire field of the enterprise. The two functions in which we are most interested are those of the selection and employment of personnel and the education or training of the personnel after they have been hired. The corresponding specialists in charge of these functions are the employment or labor manager and the educational director.

The *latest development* in the field of organization is that of the functional-committee organization. Instead of placing the entire control of certain functions in the hands of one expert or specialist, with assistants under him, committees are appointed to take charge of these functions, an expert usually acting as chairman of the committee.

## PRESENT TENDENCIES

All these changes show decided tendencies along three lines: *first*, the development of scientific methods in all forms of human endeavor; *second*, the tendency to increasing specialization in all forms of human activity; and, *third*, a greater emphasis on and consideration of the individual differences of human beings, and the recognition and conservation of these differences for the benefit of the individual and society.

Exactly as we have developed along these three lines in industry and business, so have we developed along the same lines in the field of education. Education is no longer considered exclusively as an art or philosophy but is now conceived of as a science. It is no longer possible for one individual to be expert in all lines and kinds of educational activities.

Out of all these rapidly evolving and ever-developing movements in society, in industry and business, and in education, the movement has developed for the specialized function of vocational guidance in our public schools and the special field of educational endeavor as represented by the director of vocational guidance and the vocational guidance adviser. Finally, greater consideration is given to the needs of the student as paramount to the arrangement of the subject matter.

Striking as have been the changes in industry and business, no less remarkable have been the changes in education. Where we formerly educated exclusively for appreciation and consumption, we now offer opportunities for education for power and production. In the past our education has been largely *consumer education*, but now the beginnings of *producer education* are apparent. Education formerly was conceived as being primarily for culture, obtained through a thorough acquaintance with the classics; now it is conceived as being for service. Where the ultimate aim was entrance to a university, now we find citizenship as the all-embracing aim. We have interpreted our slogan of "Education for Democracy" at least partly into terms of a more democratic form of education.[4]

All of the above are part and parcel of the development of the scientific phases of education as an outgrowth of the philosophical phases of education. We formerly said in regard to any educational question or problem: the philosophical, "I believe this to be so but I have no evidence." Now, more and more do we find that we can respond with the scientific, "I know this to be so—here is the evidence."

This, in large measure, has been made possible among other factors by the recent significant developments in the field of behavioristic psychology, the discovery of methods of measuring intelligence, the significance of intelligence levels, the formulation of scales, standards, tests, and measures in other fields of education, and the use of the survey as a device for inductively determining course content, as differentiated from the old-fashioned deductive method for the determination of curricula and courses.

In the field of sociology we have the beginnings of what will certainly prove to be significant technique and standards in regard to curricula content and educational objectives.

These movements along with others not mentioned, such as child labor, the steadily rising compulsory school age, the development of special schools, Federal legislation in regard to education, etc., have brought about significant and important changes in our social, educational, and industrial organizations and activities. It is only by making a study of, and keeping pace with, the developments in these fields that the vocational guidance worker can hope to be effective in his or her particular field.

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[4] Eliot, C. W., *The Tendency to the Concrete and Practical in Education*, Houghton Mifflin Company, New York, 1913.

# CHAPTER II

## THE EVOLUTION OF THE GUIDANCE IDEA

The desire for guidance, self-analysis, and self-study is so prevalent among all peoples in all conditions as to amount almost to an instinct. One of the surest ways to attract and hold the attention and interest of anyone is to get him to talk about himself or to begin to talk about him, his possibilities, capabilities, potentialities and future. Evidence of this is found in all the recorded history of the human race.

### PLATO

Plato, the great Athenian philosopher, who was born about 427 years B.C., in his work on the ideal society, entitled *The Republic of Plato*,[1] makes some surprisingly interesting statements. The following are extracts from that book:

On page 60:

> Well, *when is a man likely to succeed best?* When he divides his exertions among many trades, or when he devotes himself exclusively to one? When he devotes himself to one. *No two persons are born alike* but each differs from the other in individual endowments, *one being suited for one thing and another for another*, and all things will be provided in superior quality and quantities and with greatest ease when each man works at a single occupation and in accordance with his natural gifts.

On page 62:

> By no means, there are persons who, with an eye to this contingency undertake the service required, and these in well-regulated states are, generally speaking, *persons of excessive physical weakness*, who are of no use in other kinds of labor. Their business is to remain on the spot in the market and give money for goods to those who want to sell, and goods for money to those who want to buy.

On page 66:

> But as we caution the shoemaker you know against attempting to be an agriculturist or a weaver, or a builder, besides, with a view to our

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[1] DAVIES, J. L. and VAUGHAN, D. J., *The Republic of Plato*, A. L. Burt Company, New York.

shoemaking being well done, and to every other artisan we assigned in like manner one occupation, *namely, that for which he was naturally fitted*, and in which, if he let other things alone and wrought at it all his time without neglecting his opportunities, he was likely to prove a successful workman.

On page 122:

And, as a *third kind of test*, we must try them with witchcraft, and *observe their behavior;* and, just as young horses are taken into the presence of noise and tumult, to see whether they are timid, so must we bring our men, while still young, into the midst of objects of terror, and presently transfer them to scenes of pleasure, *trying them much more thoroughly than gold is tried in the fire*, to find whether they show themselves under all circumstances inaccessible to witchcraft, and seemly in their bearing, good guardians of themselves and of the music which they have been taught, approving themselves on every occasion true to the laws of rhythm and harmony, and acting in such a way as would render them most useful to themselves and the state.

On page 124:

The rulers therefore have received this in charge first and above all from the gods, *to observe nothing more close, in their character of vigilant guardians, than the children that are born, to see which of these metals enters into the composition of their souls;* and if a child be born in their class with an alloy of copper or iron, they are to have no manner of pity upon it, but giving it the value that belongs to its nature, *they are to thrust it away into the class of artisans or agriculturists;* and if again among these a child be born with any admixture of gold or silver, when they have assayed it, *they are to raise it either to the class of guardians, or to that of auxiliaries.*

### PASCAL AND RICHARDS

Pascal showed the importance of a wise choice of occupation as early as 1670. A document, published in England at the beginning of the Industrial Revolution, denounced the educational system in vogue at the time as a preposterous waste of time, "improving talents, without ever having discovered them"; "a promiscuous line of instruction without regard to genius, capacity, or probable situation in the commonwealth."

In 1881, Lysander S. Richards published a curious little volume, for which he coined the name "Vocophy," in which he attempted to bring order out of chaos and establish *a system to enable a person to find the most fitting pursuit* in which he can reap the greatest success that is possible for him individually to attain.

### CHARACTER ANALYSIS

In the literature of all periods evidences are found of a desire for some system or method whereby it might be possible for one individual to look at another and, by certain physical stigmata, prognosticate the future life and field of activity for that person. This desire has resulted in the pseudo-science of character analysis, which, in spite of the fact that it has been thoroughly and entirely discredited, still finds many believers among the credulous.

### SHAKESPEARE

William Shakespeare (1564–1616) gives evidence of this belief in some of his writings, as follows: Julius Caesar, I, ii, 194:

> Yond Cassius has a lean and hungry look;
> He thinks too much.

Macbeth, V, iii, 12:

> Thou cream-faced loon.
> Where got'st thou that goose look?

Midsummer Night's Dream, III, ii, 57:

> So should a murderer look, so dead, grim,
> Yet you, the murderer, look as bright, as clear,
> As yonder Venus.

Twelfth Night, i, 2–5:

Thou hast a mind that suits with this thy fair and outward character.

Richard I, iii, 2, 5:

> His treasons will sit blushing in his face.

All's Well, II, i, 99:

> A traitor you do look like.

All's Well, V, ii, 24:

He looks like a poor, decayed, ingenious, foolish, rascally knave.

Merchant of Venice, V, i, 83:

> The man
> That hath no music in himself,

Nor is not moved with concord of sweet sounds,
Is fit for treasons, stratagems and spoils;
The motions of his spirit are dull as night
And his affections dark as Erebus;
Let no such man be trusted.
Mark the music.

Cymbeline, I, i, 24:

I do not think
So fair an outward and such stuff within,
Endows a man but he—You speak him far.

Measure for Measure, I, i, 28:

There is a kind of character in thy life,
That to the observer doth thy history
Fully unfold.

## MEDIEVAL WRITERS

For about two hundred years system after system was proposed whereby *the similarities of people with certain animals were supposed to indicate like mental attributes.* Even to the present time this method is being advocated and used by our most widely read character analysts. Some of these olden time writers laid most emphasis upon the shape of the head and the amount and kind of protuberances on the head; others laid most emphasis upon the shape of the nose, the type of chin, the color and the texture of the hair. Others formulated certain hypotheses, endeavoring to find substantiations for these hypotheses in the writings of the Bible. Some of these writers and their works are as follows:

*Arcandam*, by William Warde, published by F. Kingston, London, 1649: "The most excellent, profitable, and pleasant book of the famous doctor, and expert Astrologian, Arcandam, or Alcandrin, to find the fatale destiny, Constellation, complexion and natural inclination of every man and childe by his truth; with an addition of Physiognomy, very pleasant to reade. Now newly turned out of our French into our Voulgar Tongue."

### PHYSIOGNOMY

*The History of Animals of Aristotle, and His Treatise on Physiognomy*, translated from the Greek by T. TAYLOR, London, 1809.

LE BRUN, C. A., *Physiognomy (Comparative) Series of Drawings Illustrative of the Relation between Human Physiognomy and Animal*, Fal, London, 1827.

Clark, John, *Physiognomy, An Essay on Conversations Concerning Features, Particularly the Nose, as Connected with Intellect.*

Gall, F. J., *Phrenological Works*, 6 vols., Boston, 1835.

Spurzheim, J. C., *Phrenology in Connection with the Study of Physiognomy*, Truettel, Wurtz, and Richter, London, 1826.

Warne, J. A., *On the Harmony between the Scriptures and Phrenology*, Maclachlan and Stewart, Edinburgh, 1836.

Fowler, O. S. and S. N., *Phrenology Proved, Illustrated and Applied*, W. H. Colyer, New York, 1837.

Combe, George, *A System of Phrenology*, 5th American from the 3d Edinburgh ed., revised and enlarged by the author, Marsh, Capen, and Lyon, Boston, 1838.

Fowler, O. S., *Practical Phrenology*, published by O. S. Fowler, Philadelphia, 1840. (Giving a concise view of phrenology, describing the mental powers in seven degrees of development.)

Fowler, L. M., *Phrenological Guide Designed for Students of Their Own Character*, Fowler and Wells, New York, 1845.

Wells, Samuel Roberts, *Physiognomy—How to Read Character*, S. R. Wells, New York, 1872. (Handbook of phrenology and physiognomy—with descriptive chart.)

## PHRENOLOGY

All the current books on character analysis, phrenology, and physiognomy are nothing more nor less than a renaissance of the material in these old books. In spite of the vigorous claims of some of our modern character analysts to be the discoverers of a new science, all of their material may be found in these ancient writings. None of them has contributed one bit of scientific evidence to support their claims.

Phrenology was founded and formulated before any of the recent startling discoveries of modern science was dreamed of. In 1815, Dr. Gall of Vienna coined the name "phrenology," laid the foundation for the so-called system, and was its modern progenitor. In America the system was expounded by Caldwell, the Fowler brothers, and S. R. Wells; and in England by Spurzheim, Combe, and Elliotson. The scheme as founded by Gall was to inspect the scalp and the contour of the head and the facial features, and to judge from them the possession or non-possession of specified mental and moral characteristics. Each of the faculties was supposed to be located in a certain specified area of the brain. The entire number of these characteristics or faculties is given as 43, each with its own particular location. One of these phrenological schemes locates nine particular characteristics around the eye below the eyebrow; another has the face charted and plotted into 120 areas, each indicating the possession or non-possession of some mental quality. Although the Paris Institute of Psychological Research in 1807 issued a statement discrediting phrenology, the high point of belief in this alleged science was reached in 1830, when there were 30 phrenological societies and about six journals published in the interest of this so called science.

At the present time the modern exponents of phrenology, physiognomy, and character analysis are bitterly opposed to each other, each one claiming to be the discoverer of a special system that is exclusively the right one, and all claiming to be scientific. Some, along with the other things mentioned, now include palmistry and handwriting.

One of the best known of these character analysts has the following statement in some of the issued literature (1924):

> (c) Complete Typewritten Analysis, including Advice and Temperaments, Talents, Vocation and Handicaps; Physical Condition, Food and Exercise; Selection of Partner in Business or Life Mate; Advice on Business and Professional Work and Dominant Possibilities; Special Counsel requiring Time, Thought and Deliberation; with Marked Chart—$25.

In addition, this same person offers a course in Scientific Character Reading "based upon physiological, phrenological, psychological, physiognomical and anatomical principles. The fee for this course being $30. Another quite popular "professor" in this field will give a so-called reading for $1 and will sell you his entire course for 50 cents.

During the past five years there have arisen a crop of "character analysts" who are traveling over the country, whose general procedure is to lavishly advertise a free course of lectures in some centrally located hall, at which enough material is given to arouse the curiosity of gullible individuals. Then another course of lectures is announced for the week following, for which they are urged to enroll, the fee usually being $15 or $25. These lectures are highly inspirational in character, and range from Couéism to Christian Science and Dieting. Private character readings for an extra fee are carried on during the daytime.

The progress of the scientific study of the brain has rendered the entire scheme of character analysis obsolete, and therefore dangerous and misleading. Practical anatomy, physiology, and applied psychology have proved, beyond question, that the exterior of the skull and the form of the features are not in any manner an index to mental processes or the possession of specified characteristics, faculties, abilities, or aptitudes.

The following points are used as a basis for this opposition to phrenology and character analysis.

### NINE POINTS AGAINST CHARACTER ANALYSIS[1]

1. Although cerebral localization *for certain sensory and motor centers* has been scientifically demonstrated, it has also been scientifically demonstrated that there is no similar cerebral localization for such general traits of character as self-esteem, acquisitiveness, secretiveness, constructiveness, combativeness, calculation, language, firmness, spirituality, number, time, tune, weight, color, etc. This at once sweeps away the foundation upon which almost the entire body of claims of the character analysts rests. Their main stock in trade is the claim that certain protuberances or depressions in the skull and certain shapes and lines of the features of the face indicate possession or non-possession of certain specified characteristics or abilities. For instance, all the systems of phrenology claim that the possession of a high forehead is an indication of intelligence, reasoning ability, and reflection. It is a proved fact, however, that that portion of the brain is devoted to the muscular control of the organs of speech. An injury to that portion of the brain may cause a person to lose control of the muscles of the lips, tongue, throat, etc., but at the same time be able to read, write, and think speech, and in no wise affect the intelligence of that person. Again, most of the systems of phrenology locate the so-called faculty of reverence at the top of the head. Practical anatomy has proved that that particular portion of the brain controls the muscular sensations of the feet and legs. It has also proved that any injury to any particular portion of the brain does not result in a corresponding loss of mental or moral characteristics, but does show in a definite way a loss of sensory or motor capacities in some particular portion of the body.

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[1] See also HOLLINGSWORTH, H. L., *Vocational Psychology*, D. Appleton & Company, New York, 1917, p. 25 ff. DUNLAP, K., "Fact and Fable in Character Analysis," *Annals of the American Academy of Political and Social Science*, vol. cx, No. 199, Nov., 1923, p. 74 ff. HALL, G. S., *Life and Confessions of a Psychologist*, D. Appleton & Company, New York, 1923, p. 448.

2. *No scientific data have been presented to prove that there is any correspondence between size and functional capacity of the brain as a whole or any portion of it.* No scientist has as yet established any correlation between definite areas of the brain and specific mental, moral, or emotional qualities. But it is a scientifically established fact that there is no correlation between the volume, the shape, or the weight of the brain and the general traits of character emphasized by the character analyst. Two human brains might be taken to any professor of neurology, one brain belonging to a person of high intelligence, the other to a person of average intelligence, and it would be impossible for this professor of neurology to tell you which brain belonged to which person. Again, we cannot even be sure, judging from the size of a man's skull, how large the brain is that is inside of that skull.

3. It is a scientifically established fact, then, that the shape and the various thicknesses of the bones of the head are no indication as to whether or not brain tissues of any kind or cerebrospinal fluid will be found underneath. *It is a scientifically established fact that the conformation of the brain does not necessarily follow the conformation of the outside of the skull.* The skull itself varies in thickness, and the same area in different people also varies in thickness. The brain is enveloped in three membranes, one of which is quite thick, and spongy with blood vessels. These membranes adapt themselves to the shape or changes in the brain without affecting the outer skull in any way. Surrounding these three membranes is the liquid lymph. Daniel Webster had a skull much larger than the ordinary person. He had an exceptionally large cranial capacity, but his brain, when examined, measured, and weighed after his death, was found to be no larger than that of the average person, the rest of his skull being filled with lymph.

4. The evidence presented by the neurologists leads us to believe that *the functional capacity of the brain depends upon the complexity and the type of structure, upon the thickness of the cortex, upon chemical and molecular action, upon the convolutions, the fissures, and the quality of brain structure* rather than upon mere mass, weight, size, or shape.

5. The entire body of claims made by the character analyst is based upon limited and casual observation of exceptional cases and selected groups, by people who have not been trained in scientific methods of research, the observational method being

used almost entirely throughout. In fact, the method used throughout the development of character analysis has been first to establish a hypothesis, and then to search until some exceptional case is found which will support this hypothesis. It is just as easy to find cases which do not fit as to find those which do. The analysts, however, emphasize those which do fit and ignore those which do not.

6. *None of the claims for ability to analyze character by the method of the character analysts are based on objective evidence which can be scientifically measured, weighed, evaluated, and tested.* In all fields of science and scientific research, workers submit their findings, along with the evidence to scientific tests by their colleagues and other scientists, before they give their findings to the world, or attempt to use them for the selfish end of financial gain.

7. *On the basis of physical stigmata alone, we are unable to decide the presence or the absence of specific traits or abilities.* Lombroso, the Italian criminologist, made a study of the physical peculiarities of criminals which covered several years and thousands of cases. His study of criminals led him to believe that they possessed certain stigmata or signs which would enable him to pick out potential criminals from among young people and then have them watched by police, thus preventing crime rather than punishing it after it had been committed. His whole scheme broke down because his so-called criminal stigmata were found in individuals of the highest character, and before his death he abandoned the scheme completely.

8. Up to the present time no character analyst has presented any scientific data as proof for the wide-sweeping claims and assertions made by them.

9. On the basis of these facts we feel justified in taking the stand that the claims of the so-called science of character analysis rest on assumptions entirely unwarranted by the facts. Since this is true, we can assume that its use in any situation of importance will be misleading and harmful.

By merely looking at a person we are unable to decide whether he is a desperate or a degenerate criminal, a pervert, an introvert, a mediocre person, a genius, an idiot, an imbecile, a madman, or a fool. Fine hair or delicate skin does not necessarily indicate delicacy of perception, judgment, or sensitiveness. *A convex, a concave, or a plane face is no criterion of the quality of the brain or* *of its functioning in the behavior or the reactions of the person to whom it may belong.*

## THE PHYSIOLOGICAL CONCEPTION

The whole field of character analysis is based upon the physiological conception as an indication of the probable reactions, capacities, and behavior of human beings. This conception holds that the phenomena of consciousness are accompanied by corresponding changes in the brain, and to these particular brain changes the supporters of this conception devote all their attention.

At the beginning of the nineteenth century, the physiological conception had attained almost universal acceptance. Research in anatomy and the physiology of the brain, the discovery of the microscopic structure of the brain, and the application of experimental methods to cerebrophysiology added to our stock of knowledge. In the enthusiasm created by these facts it was quite confidently expected that the nature of the mental processes and of mental degeneration and growth would be laid bare. These hopes, however, were not realized, and it was soon generally agreed that some other method of approach to the study of the phenomena of consciousness and the development of capacities, characteristics, and aptitudes must be found

## THE PSYCHOLOGICAL CONCEPTION

The new approach is the psychological conception, which is based upon the point of view that mental processes can be directly studied in the behavior of the individual, and without making any reference to changes that are, rightly or wrongly, assumed to take place in the brain or its structure. The psychological conception regards the conscious processes as the actual phenomena with which it is to deal. In fact, it is quite generally accepted that we can now tell more about the quality of brain structure, the possession or non-possession of certain capacities, and the likely reactions of individuals to certain stimuli, by a study of their behavior than by any other method. This is known as the field of behavioristic psychology.[3]

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[3] See HART, B., *The Psychology of Insanity*, University Press, Cambridge, England, 1922, p. 9 ff. WATSON, J. B., *Psychology from the Standpoint of a Behaviorist*, J. B. Lippincott Company, Philadelphia, 1919.

This psychological conception has been the foundation for the beginnings of psychological measurements in terms of the behavior or the reactions of people under certain strictly specified and controlled conditions. The first attempt toward the solution of this problem of determining the functioning of the brain by the behavior of the individual is found in the attempts of medical practitioners to formulate reliable tests for the classification and treatment of the various grades of feeblemindedness.

## THE BEGINNINGS OF SCIENTIFIC TESTING

The first publications were by Itard, a French physician, who in 1801 published a pamphlet entitled *De l'Education d'un Homme Sauvage.* This pamphlet was a report of Itard's experiment in attempting to educate a boy who had been discovered in the forests of Avyron. This boy was living the life of an animal and upon examination was pronounced to be an idiot. Itard contended that it was possible by kind and humane treatment to make out of the boy a normal human being. The experiment failed, but it served the purpose of calling attention to the pitiable condition of the feebleminded.

To Edward Seguin belongs the honor of laying the foundation for the real method of the treatment and education of idiots. In 1866, Seguin described his methods of analysis, treatment, and education in a book entitled *Idiocy and Its Treatment by the Physiological Method.* In this book he says:

> The aptitudes thus created are then applied to different specialties, each according to the fortune, age, or position of each individual, care being taken to choose in every case an occupation which will keep in activity the muscular system as well as the mental faculties.[4]

Fitzherbert, about 1500, proposed that the capacity of the alleged idiot to count 20 pence, to tell his age, or to tell who were his father or mother should be used as tests of mentality.

Swinburne, nearly a hundred years later proposed that the person should be examined to see whether he could measure a yard of cloth or name the days of the week. *True psychological measurements, however, began with the work of Fechner* (1801–87).

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[4] See NORSWORTHY, N., "The Psychology of Mentally Deficient Children," *Columbia University Contributions to Philosophy and Psychology,* vol. xv, No. 2, Science Press, New York, Nov., 1906.

Up to 1890, a great deal of work was done by numerous people, but the confines of this book will not permit even slight mention of them.[5]

In the United States psychologists began to be interested in tests and psychological measurements about 1895. They began to hear of the work of Kraepalin, who originated the word "*dementia praecox,*" and who developed methods for the diagnosis of mental abnormalities. They also heard of the work of Binet, the French physician, who was making a study of individual psychology and was attempting to formulate a scale for the measurement of intelligence. The results of Binet's studies appeared in 1905 in his first series of tests for the measurement of intelligence. This was followed in 1908 by his second series of tests. Since that time there has been a wide-sweeping movement for the development of tests, scales, and measures of all kinds.[6]

We now have well-standardized tests of attention, perception, description, report, association, learning, memory, suggestibility, imagination, invention, range of information, size of vocabulary, achievement in arithmetic, algebra, geometrical ability, mathematical ability, language, reading, spelling, handwriting, drawing, English composition, etc.

Credit must be given to Dr. J. N. Rice as the real beginner of the comparative test movement. In 1894, Dr. Rice began his investigations of spelling ability.

## THE WORLD WAR AND ITS RELATIONS TO SELECTION AND GUIDANCE

The World War gave a decided impetus to the movement of intelligence testing and the placing of the right man on the right job.

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[5] See Wylie, A. T., "A Brief History of Mental Tests," *Teachers College Record*, vol. xxiii, No. 1, Teachers College, Columbia University, Jan., 1922. Klemm, O., *A History of Psychology*, Charles Scribner's Sons, New York, 1914. Baldwin, J. M., *History of Psychology*, G. P. Putman's Sons, New York, 1913. Hall, G. L., *Life and Confessions of a Psychologist*, D. Appleton & Company, New York, 1923. Hall, G. S., *The Founders of Modern Psychology*, D. Appleton & Company, New York, 1923.

[6] See Appendices D and E.

The following statements were taken from the two volumes describing the personnel system of the Army[7] and give some idea of the development of the work.

### FORERUNNERS OF THE ARMY PERSONNEL SYSTEM

The history of the Army personnel organization during the war exhibits a development that is traceable to three distinct sources. The first source is found in traditional Army practice. The second is a contribution of business and industry, namely, the employment management movement. The third source of ideas and methods, which merged with the others to develop a practicable Army personnel system, is found in *the scientific approach to the study of human abilities* which has been fostered in university laboratories of psychology for a generation, and which more recently has been applied by certain large business concerns to the practical problem of discovering talent and selecting the right man for the right place. The classification and placement of officers and soldiers would not have gone forward as expeditiously as it did if there had been lacking any one of these three components—the military, the industrial, and the scientific. (P. 39.)

### THE ESTABLISHMENT OF THE COMMITTEE ON CLASSIFICATION OF PERSONNEL IN THE ARMY

August 5, 1917, is remembered by personnel officers as a significant date, because it marked *the establishment of the Committee on Classification of Personnel in the Army.* This was the culmination of a chain of events that brought to the aid of the War Department the experience of men who in their civil pursuits had dealt with problems of personnel classification and placement. (P. 53.)

### THE COMMITTEE ORGANIZES

The original membership of the Committee consisted of ten university psychologists who had specialized in the study of human traits and abilities, and two employment managers who had had extensive practical experience in the selection and placement of workers. The Committee began operations at once. At its first formal meeting in the Munsey Building offices of the National Research Council, August 7, Drs. Bingham, Dodge, Scott, Thorndike, and Yerkes were present. Dr. Thorndike was elected Chairman, and Dr. Scott, Executive Secretary.

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[7] *The Personnel System of the United States Army*, vol. i, Adjutant-General's Office, War Department, Washington, D. C., 1919. Also, *The Right Man in the Right Place in the Army*, Adjutant-General's Office, War Department, Washington, D. C., 1919.

Provisional assignments of responsibilities were agreed upon, not only for the members present, but also for those who had not yet reached Washington, including J. R. Angell, R. C. Clothier, H. L. Gardner, J. F. Shepard, E. K. Strong, Jr., L. M. Terman, and J. B. Watson. (P. 57.)

The following two of many principles developed by the committee are of especial interest to the workers in the field of guidance:

### THE PRINCIPLE OF HUMAN DIFFERENCES

The personnel executive needs *full, explicit, and accurate information as to the men's qualifications.* It is important to *recognize the great variety of human traits* that go to make up these qualifications, and to know how wide is the range of excellence in each trait in any considerable aggregate of human beings. (P. 8.)

### THE PRINCIPLE OF DEFINITE PERSONNEL REQUIREMENTS

No degree of excellence and completeness in the inventory of a man's qualifications will lead to his placement in the right job unless the requirements of the job are known. Consequently, a third principle underlying successful personnel administration calls for *definiteness in the descriptions of duties and in the statements of the qualifications sought in the men who are to discharge those duties.* (P. 11.)

### PSYCHOLOGICAL EXAMINING

The tentative use of mental tests in four of the National Army cantonments during the fall months (1917) had abundantly demonstrated their practicability and their possibilities for usefulness. In response to an inquiry from the Surgeon General regarding the value of the test data in classifying and assigning recruits, *the Committee voted on December 5 to recommend the extension of the psychological examining to all cantonments.* Favorable action was taken by the Surgeon General and the General Staff; and the winter and early spring months saw not only an extensión of the field of the psychological examining, but an increasing understanding on the part of personnel officers and psychologists of how the intelligence scores could be utilized in selecting superior recruits for special assignment or training, and in distributing available talent so as to effect a well-balanced organization. (P. 79.)

## INTELLIGENCE TESTS

### *(Army Alpha and Army Beta)*[8]

These tests are discussed at some length in Chapter X of Vol. II and it is sufficient to state here that in each camp a Psychological Examiner was stationed, commissioned in the Medical Department. All soldiers were given the tests and as a result were graded either A, B, C+, C, C−, D, D−, or E. E men, including approximately one-half of 1 per cent of the recruits, were ordinarily discharged. The meaning of the letter ratings is as follows:

A. Very Superior Intelligence. This grade is earned by only four or five soldiers out of a hundred. *The A group is composed of men of marked intellectuality.* Such men are of high-officer type when they are also endowed with leadership and other necessary qualities.

B. Superior Intelligence. B intelligence is superior, but less exceptional than that represented by A. The rating group obtained by eight to ten soldiers out of a hundred. The group contains a good many men of the commissioned-officer type and a large amount of non-commissioned-officer material.

C+. High Average Intelligence. This group includes about 15 to 18 per cent of all soldiers and contains a large amount of non-commissioned-officer material with occasionally a man whose leadership and power to command fit him for commissioned rank.

C. Average Intelligence. Includes about 25 per cent of soldiers. Excellent private type with a certain amount of fair non-commissioned-officer material.

C−. Low Average Intelligence. Includes about 20 per cent. While below average in intelligence, C− men are usually good privates and *satisfactory in work of routine nature.*

D. Inferior Intelligence. Includes about 15 per cent of soldiers. D men are likely to be fair soldiers, but are usually *slow in learning* and rarely go above the rank of private. They are *short on initiative* and so *require more than the usual amount of supervision.* Many of them are illiterate or foreign.

D− and E. Very Inferior Intelligence. This group is divided into two classes: (1) D− men, who are very inferior in intelligence but are considered fit for regular service; and (2) E men, those whose mental inferiority justifies their recommendation for Development Battalion, special service organization, rejection, or discharge.

The immense contrast between A and D− intelligence is shown by the fact *that men of A intelligence have the ability to make a superior record in*

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[8] YOAKUM, C. S. and YERKES, R. M., *Army Mental Tests*, Henry Holt & Company, New York, 1920. Also, YERKES, R. M., "Psychological Examining in the Army," vol. xv, *Memoirs of the National Academy of Sciences*, Government Printing Office, Washington, D. C., 1921.

*college or university, while D— men are of such inferior mentality that they are rarely able to go beyond the third or fourth grade of the elementary school, however long they attend.* In fact, most D— and E men are below *the "mental age" of 10 years and at best are on the border line of mental* deficiency. B intelligence is capable of making an average record in college, C+ intelligence cannot do so well, *while mentality of the C grade is rarely equal to high school graduation.* (Pp. 132, 133.)

Between September, 1917, and January, 1919, approximately 1,727,000 men in the army were examined and their intelligence rated by the Army Alpha and Army Beta intelligence tests. Alpha was given to literates and Beta to illiterates and foreigners, of the 1,727,000 tested, 83,500 low-score cases were given individual tests, which as the "Binet-Simon" and the "Yerkes Point Performance Scale."

## TRADE TESTS[9]

The various parts of the Committee's work are, in fact, so interrelated and so dependent upon each other that it is perhaps inexact to refer to any as the "principal" parts. There is the Trade Test program, for instance. Organically, this is part of the Classification of Men, mentioned above. Trade Tests are actual tests which establish positively a person's degree of skill in a trade. The information regarding a man's trade skill obtained by trained interviewers in the personnel office is far more reliable than that obtainable otherwise. It is desirable, however, when men claim skill in certain trades, to establish their degree of skill beyond any possibility of question; this can be done in a few minutes by the Trade Tests. *Tests for 84 Army trades have been prepared by the Committee on Classification of Personnel in its Trade Test Division.* (P. 6.)

The work of classifying and placing men properly in the Army has naturally required much work of a research nature before best results could be obtained. For instance, it was necessary at the outset to find out what kinds of men the Army needed. At first a crude list of some 50 classifications was used, but as time went on it was found necessary to subdivide these primary classifications into finer subclassifications. Eventually, this list took the form of *the Index of Occupations, in which are listed over* 700 *classifications of trades needed by the Army in its various branches.*[10]

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[9] *Ibid.*, vol. ii. See also, CHAPMAN, J. C., *Trade Tests*, Henry Holt & Company, New York, 1921. TOOPS, H. A., *Trade Tests in Education*, Teachers College, Columbia University, New York.

[10] *Trade Specifications and Index*, United States Army, Government Printing Office, Washington, D. C., 1918.

> *Then the Committee faced the necessity of defining the meaning of each one of these trades.* An index of 700 trades would be of little working value if the trades themselves were not clear in everyone's mind, or if different people had different ideas of what the trade terms meant. A commanding officer might call for a machinist and receive a man who was entirely unfamiliar with the particular work that he had in mind, because he and the officer furnishing the machinist had different ideas of what a machinist is.
>
> It became necessary, in short, to create a uniform language, *to write a dictionary in which each trade should be clearly defined so that misunderstanding should be impossible.* Under the direction of the Committee, this dictionary has been written. It is called "Army Trade Specifications," and within its covers are given, for each trade needed by the Army: (*a*) the duties involved, (*b*) the qualifications a man must possess in order to be able to do the work, and (*c*) the substitute tradesmen who can best be summoned in an emergency if men of the trade itself are not available. *In all,* 560 *trades and professions are so described.* (Pp. 7–8.)

Other contributions, beside the standardized intelligence tests, (Alpha and Beta), the trade tests (oral, picture and performance), and the Index to Occupations, were the Officers' Rating Scale, the Soldier's Qualification Card, the Tables of Occupational Needs and Personnel Specifications, and the Occupational Intelligence Tables. All are valuable to workers in the guidance field, not only because of the data they contain, but also because they are fine examples of technique and methods in dealing with personnel and occupations.

## DR. FRANK PARSONS AND THE VOCATION BUREAU

Preceding and paralleling the development of the more scientific phases of personnel work, we have what might be called the philosophical, philanthropic, sentimental, and aspirational phase. This phase of the development of the guidance movement was begun by social workers in settlement houses, by altruistic people who saw the dire need of their clientele for practical guidance and education toward economic self-sufficiency.[11]

To the Civic Service House, 112 Salem Street, Boston, Massachusetts, must go the honor of being the birthplace of the vocational guidance movement in this country. Here, Dr. Frank

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[11] See Davidson, T., *The Education of the Wage-earner*, Ginn and Company, New York, 1904.

Parsons began his work.[12] Here, "The Breadwinners' Institute" was organized and, finally, "The Vocation Bureau" came into being. All of this work was made possible by the beneficence of Mrs. Quincy A. Shaw, the daughter of Agassiz.

The Vocation Bureau was formed at the Civic Service House in 1908 (later transferred to 9 Beacon Street), with Dr. Frank Parsons as Director. Dr. Parsons issued his first report on May 1, 1908, and in it *used the term "vocational guidance," which was, so far as we know, the first time the term appeared in print.* The stated general aims of the Bureau were as follows:

1. To *study the causes of the waste* which attends the passing of unguided and untrained young people from school to work, and *to assist in experiments* to prevent this waste.
2. To *help parents, teachers, children,* and others in the problems of thoughtful choosing, preparing for, and advancing in a chosen life work.
3. To *work out programs of cooperation* between the schools and the occupations, for the purpose of enabling both to make a more socially profitable use of human talents and opportunities.
4. To *publish vocational studies* from the viewpoint of their educational and other efficiency requirements, and of their career-building possibilities.
5. To *conduct a training course* for qualified men and women who desire to prepare themselves for vocational guidance service in the public school system, philanthropic institutions, and in business establishments.
6. To *maintain a clearing house of information* dealing with life-career problems.

## THE FIRST PUBLIC SCHOOL SYSTEM OF VOCATIONAL GUIDANCE

One year after the formation of the Vocation Bureau in 1908 the Boston School Committee (1909) asked the Bureau, through its Director, to outline a program of vocational guidance for the public schools of Boston. This program was put into effect and has been in operation with modifications ever since.

## THE FIRST UNIVERSITY SUMMER SCHOOL IN VOCATIONAL GUIDANCE

At the Harvard University (Cambridge, Massachusetts) Summer Session in 1911, a course of ten lectures was given on vocational guidance. This course developed into a variety of regular and summer session courses at Harvard and has served as a model for courses in similar institutions all over the country.

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[12] See Parsons, F., *Choosing a Vocation*, Houghton Mifflin Company, New York, 1909.

### THE FIRST DEPARTMENT OF VOCATIONAL GUIDANCE

In 1914 Boston University established a Department of Vocational Guidance, which was the first of its kind. The same year the Woman's Educational and Industrial Union, Boston, offered a "Course in Vocational Guidance."

All of the above were a direct outgrowth of the Vocation Bureau and its Director, Dr. Parsons, his successor, Meyer Bloomfield,[13] and his assistant, Frederick J. Allen.[14]

### THE HARVARD VOCATION BUREAU

In 1917 the Director of the Vocation Bureau, Meyer Bloomfield, was asked to go into war work and the Bureau was transferred to the Division of Education at Harvard University, the Graduate School of Business cooperating in the management of the Bureau by appointing two members of its faculty to assist in its direction. Its aims then were, and are now, as follows:

To become a center of information on the movement for vocational guidance.

To serve Harvard men and others in the problems of choosing, preparing for, and entering on a vocation.

To continue occupational research and publication.

To conduct surveys in schools, in various lines of business, and in the industries, with a view to establishing or promoting effective vocational guidance.

To train vocational counselors for service to young people in the public schools and elsewhere.

To cooperate in the employment manager movement.

To aid and cooperate with other vocational guidance organizations.

To be of individual and public service in the reorganization of employment conditions arising from the present war.

### THE NATIONAL VOCATIONAL GUIDANCE ASSOCIATION

*The first national conference dealing specifically and exclusively with vocational guidance was held in Boston, November,* 1910. It was held under the joint auspices of the Vocation Bureau and the Chamber of Commerce of Boston. No record was kept and no proceedings published. The second national conference was held in New York, October 23–26, 1912, and proceedings published.[15] At the 1917 Philadelphia conference The National Employment Managers' Association was formed. Except during the war, conferences have been held and their activities recorded either as proceedings or in the *Vocational Guidance Bulletin.* The present secretary of the association is Dr. John M. Brewer, Graduate School of Education, Harvard University, Cambridge, Massachusetts. The dues are $2, which include subscription to the *Vocational Guidance Magazine.*

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[13] See Bloomfield, M., *Readings in Vocational Guidance*, Ginn and Company, New York, 1918.

[14] See Allen, F. J., *A Guide to the Study of the Occupations*, Harvard University Press, 1921.

### THE VOCATIONAL GUIDANCE MAGAZINE

The National Vocational Guidance Association in April, 1915, published No. 1, Volume I, of the *National Guidance Bulletin,* a small folder of four pages. The *Bulletin* continued through several volumes until, on December 1, 1922, the Vocation Bureau of Harvard University accepted the responsibility and on March 1, 1924, its name was changed to the *Vocational Guidance Magazine.* It is now a monthly publication of some 35 pages with Frederick J. Allen as editor.

### ELI W. WEAVER

#### THE NEW YORK STUDENTS AND COMMITTEE

As Boston had its Frank Parsons, so had New York its Eli W. Weaver,[16] who, as chairman of the Students' Aid Committee of the High School Teachers' Association of New York City, developed the guidance movement until by 1908 in each day and evening high school there was a teacher or a committee of teachers to help students not only in deciding what vocation to choose, but in learning how to enter it. This work was purely voluntary on the part of the teachers and was carried on in addition to their regular duties. At this time the Students' Aid Committee stated its objects as follows:

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[15] *Proceedings of the Second National Conference on Vocational Guidance,* Benjamin C. Gruenberg, Sec'y, Commercial High School, Brooklyn, N. Y., 1915.

[16] See WEAVER, E. W., *Building a Career,* Association Press, New York, 1922; *Profitable Vocations for Girls,* A. S. Barnes & Company, New York, 1915; *Medicine As a Profession,* A. S. Barnes & Company, New York, 1917.

In order that local committees and the teachers of the several schools may be better prepared to help pupils who leave school to fit themselves to their environment, the general committee has planned to collect and make available information regarding:

1. The necessary and prescribed qualifications for entering the skilled trades and learned professions in this city.
2. The opportunities which are furnished to the young people of this city for acquiring these necessary qualifications, the time usually required, and the expense to the individual of qualifying himself.
3. The restrictions which are placed by labor unions and professional bodies upon candidates who desire to enter the several skilled trades or professions.
4. The average remuneration and the relative permanency of employment which a properly qualified person of either sex may expect in each of the skilled trades, the learned professions, and the commercial pursuits in which young people are usually employed.

## THE DEVELOPMENT OF VOCATIONAL GUIDANCE IN OTHER COUNTRIES

### SCOTLAND[17]

*To Mrs. Ogilvie Gordon of Aberdeen, Scotland, must be given the credit for being one of the first to see the need of, and to start the work in vocational guidance.* In a lecture given before a Glasgow audience, March, 1904, Mrs. Gordon presented a plan whereby school boards should establish bureaus for guiding boys and girls into employments for which they were best fitted and for supervising their progress in those occupations.

In 1908 Mrs. Gordon issued a handbook of employments for the use of boys and girls.[18] There is no doubt but that the work of Mrs. Gordon and her associates in the social service field prepared the way for the Education Act of Scotland, which became effective in 1908 and which contained as one of its provisions the phrase, "in maintaining, or combining with other bodies to maintain any agency for collecting and distributing information as to employments open to children upon leaving school."

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[17] See BLOOMFIELD, M., "The School and the Start in Life," *Bull.*, No. 4, U. S. Bureau of Education, Washington, D. C., 1914.

[18] GORDON, MRS. OGILVIE, *A Handbook of Employments*, Rosemount Press, Aberdeen, Scotland, 1908, 444 pp.

### ENGLAND

*England passed its Choice of Employment Act in* 1910. This was operative only in England and Wales. This act contained the phrase:

> shall include a power to make arrangements, subject to the approval of the board of education, for giving to boys and girls under seventeen years of age assistance with respect to the choice of suitable employment by means of the collection and the communication of information and the furnishing of advice.

### GERMANY

In 1908, Dr. Wolff, Director of the Bureau of Labor Statistics at Halle, Germany, opened the Bureau evenings for consultation hours for the parents of young people seeking employment.

The Berlin Labor Employment Bureau in May, 1913, conducted the first moving picture show for distributing vocational information.

In 1912 the Leipzig Manufacturers' Association started a guidance bureau for young people leaving school.

## FURTHER DEVELOPMENTS IN THE UNITED STATES

During the seven years following the signing of the Armistice much progress has been made in the field of guidance.[19] This progress has been marked by the scientific character of the work. The individual, inspirational interview method has been abandoned. Scientific analysis, the classification of case groups, the development of specific tests, standards and technique have made the old guidance methods advocated before the war very much out of date.

## STATE AND FEDERAL LEGISLATION

Already we have the beginnings of State and Federal legislation granting financed aid to vocational guidance. In 1913 the State of Connecticut passed a law which contained the following:

> The Board of School Visitors, Board of Education, or town school committee of any town, city, or borough may establish vocational guidance as a part of the educational system of such municipality, and may

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[19] See REED, A. Y., *Junior Wage Earners*, The Macmillan Company, New York, 1920. Also the issues of the *Vocational Guidance Magazine* for 1923–24.

in its discretion employ a vocational counselor whose duties and compensation shall be prescribed by such board. (General Statutes 1913, chap. 153; School Laws 1922, Sec. 79.)

The Connecticut legislation is, so far as we are aware, the first legislation concerning vocational guidance in any State.

### UNITED STATES JUNIOR EMPLOYMENT SERVICE

On page 210 of this volume will be found a brief description of the development of the United States Junior Employment Service, which gives financial and other aid to the placement phase of guidance. This service was begun December 6, 1918.

### THE NEW ZEALAND APPRENTICE ACT[20]

The New Zealand Parliament, August 29, 1923, passed the Apprentice Act. In Sec. 18 of this Act is found the following:

> The head teacher of any school may be required to furnish a report on every child that leaves the school for the purpose of entering employment, and on application of the child or his parent or guardian the District Registrar shall advise and assist the child in obtaining suitable employment; for this purpose, the District Registrar shall keep a register of such applications and of vacancies, which shall be open, without charge, to inspection by anyone concerned . . . To enable the head teacher to prepare such a report, it shall be his duty to watch carefully the progress of each child in the upper classes of his school, and to take notice of his character, aptitude, and attainments.

This brings sharply into the foreground the whole question of guidance with its many ramifications and problems. This phase of the work is by the law placed as a definite responsibility on the shoulders of the educators.

The report of the head teacher includes, among other obvious items, such as age, address, etc., the following more significant items: (1) occupation of parents or guardian; (2) behavior of pupil; (3) grade attained; (4) strong subjects; (5) weak subjects; (6) teacher's observations. In all, there are only ten items upon which the head teacher reports.

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[20] See PAYNE, A. F., "Recent Legislation concerning Apprenticeship and Vocational Guidance in New Zealand," *Vocational Education Magazine*, vol. ii, No. 10, June, 1924, pp. 800–802.

## NEW LEGISLATION CONCERNING VOCATIONAL GUIDANCE IN NEW YORK STATE[21]

The assembly of the State of New York during April, 1924, passed the following significant amendment to the Continuation School Law, and in May, 1924, it was signed by Governor Smith.

> The board of education of each city and of each such school district may employ one or more qualified teachers for the purpose of issuing employment certificates, providing vocational guidance instruction and placement or employment service for minors in attendance upon part-time or continuation schools and such other minors under the age of eighteen years as are in regular attendance upon full-time instruction. Such vocational guidance courses and the plans for placement or employment service and the qualifications of such teachers shall be approved by the commissioner of education. The commissioner of education may make an apportionment of money as provided in section six hundred and five of this chapter on account of the employment of such vocational guidance teachers on the same basis and in the same manner as for part-time or continuation school teachers.

Under the provisions of this Act, the State of New York will reimburse the local communities to the extent of one-half of the salaries of "teachers" of vocational guidance with a maximum quota of $1,000 on account of the salary of any one teacher. No aid will be given if such "teachers" spend less than one-half of their entire time in guidance. If less than full time, but more than half time, is spent, the aid will be pro rated.

It is interesting to note that, although this legislation is an amendment to the Continuation School Law, it provides for financial aid in the salaries of "teachers" of vocational guidance in schools other than continuation schools, provided they are "minors under the age of eighteen" and "are in regular attendance upon full-time instruction." This allows of the reimbursement of such vocational guidance "teachers" in the entire field of secondary education as well as in the continuation schools. Furthermore, such teachers are engaged "on the same basis and in the same manner for part-time as continuation school teachers," with the addition of certain qualifications as follows:

### TENTATIVE QUALIFICATIONS FOR "TEACHERS" OF VOCATIONAL GUIDANCE

The following tentative plan for the qualification and certification of these vocational guidance "teachers" has been announced:

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[21] New York State Assembly Bill 397, Jan. 22, 1924.

1. *Limited Vocational Guidance Certificate.*—A limited vocationa guidance certificate is a license issued by the Commissioner of Educatio to teach vocational guidance in the public schools of the State for period of three years. This certificate is not renewable and is grante only on condition that at the expiration of the three years the full requirements for a permanent vocational guidance certificate will be issued.

(The limited vocational guidance certificate is granted only to those persons who present evidence of fully meeting the general educatilona and occupational experience requirements, and of having completed at least six credit hours of work in the special courses required for the permanent certificate to teach vocational guidance and further only upon the request of a city, village, or district superintendent of schools after the applicant has been assured of a position to teach.)

2. *Permanent Vocational Guidance Certificate.*—A permanent vocational guidance certificate is a life license issued by the Commissioner of Education to teach vocational guidance in the public schools of the State. This certificate is granted upon the satisfactory completion of the required general and special teacher-training courses.

(Upon the request of a city, village, or district superintendent of schools a permanent vocational guidance certificate may be granted to any persons who have been assured of a position to teach and who present evidence of having full equivalent qualifications of those required for the completion of the general and special teacher-training courses.)

### QUALIFICATIONS OF TEACHERS OF VOCATIONAL GUIDANCE

1. Graduation from an approved four-year high school course and the satisfactory completion of an approved two-year teaching course, together with three years of satisfactory teaching experience or approved occupational experience, *or*

2. The possession of a permanent or special vocational license, or a license to teach some subject special in nature, such as industrial arts, commercial, homemaking, etc., together with three years of satisfactory teaching experience, *or*

3. Graduation from an approved four-year high school course and at least five years of satisfactory experience in employment or placement service or educational work in commercial or industrial establishment, *or*

4. Graduation from an approved four-year college course and two years of satisfactory practical or professional experience in industry, commerce, agriculture, or other like occupational field.

5. In addition, all candidates for the certificate to teach vocational guidance must present evidence of having completed the following courses:

TABLE I

GENERAL COURSES

| | CREDIT HOURS |
|---|---|
| Educational Psychology | 2 |
| Principles of Teaching | 2 |
| Educational Measurements | 2 |
| School Administration | 2 |
| Sociology | 2 |
| Labor Problems | 2 |
| Industrial History *or* History of Commerce | 2 |
| Economics | 2 |
| Total | 16 |

SPECIAL COURSES

| | CREDIT HOURS |
|---|---|
| Theory, Principles, and Problems of Vocational Education | 2 |
| Vocational and Educational Guidance | 2 |
| Vocational and Educational Guidance Seminar (study of occupations and professions) | 4 |
| Placement and Follow-up Work | 2 |
| Educational and Labor Legislation | 2 |
| Surveys, Job Analysis, Plant Studies, etc. | 2 |
| Principles and Problems of Secondary Education | 2 |
| Total | 16 |

The New York State legislation is the most recent and advanced of any similar legislation and fairly represents the present status of the evolution of the guidance idea.

In this necessarily brief summary of the evolution of the guidance idea we hope that we have developed the fact that it is a fundamental factor in our rapidly developing social order, and that the need for diagnosis and guidance of individuals is becoming more pressing with the increasing complexity and specialization of our civilization. It is not conceivable that we shall continue emphasizing the conservation of our forests, water power, coal, mines, etc., and fail to see the supreme importance of conserving human beings, their individual potentialities, for the ultimate end of service to society and happiness of the individual.

## CHAPTER III

# THE TERMINOLOGY OF VOCATIONAL GUIDANCE[1]

Whenever any advance is made in any field of human endeavor, difficulty develops in regard to terminology. No field of endeavor can be classed as a science until its terminology is standardized. Education is now in the process of changing from an art and a philosophy to a science. In all the divisions of education there is more or less difficulty with terminology. This is particularly true in the field of vocational guidance.

There is no common agreement as to whether vocational guidance includes educational guidance or whether the reverse is true. Neither is there any agreement as to whether either of the above include moral, avocational, health, and civic guidance or whether or not all seven types of guidance should be included under the all-inclusive term *life guidance.*

### TWENTY-FOUR TERMS NOW IN USE

The following 24 terms are at the present time used more or less interchangeably in the field of guidance, as shown by a study of its literature:

1. Vocational Guidance.
2. Vocational Advisement.
3. Vocational Counseling.
4. Vocational Adjustment.
5. Vocational Testing.
6. Vocational Tryouts.
7. Vocational Placement.
8. Trade-finding Classes.
9. Self-surveys and Analysis.
10. Self-finding and Guidance.
11. Occupational Guidance.
12. Educational Guidance.
13. Social Guidance.
14. Occupational Information.
15. Vocational Information.
16. Vocational Supervision.
17. Employment Supervision.
18. Vocational Analysis.
19. Life-career Classes.
20. Follow-up.
21. Self-adjustment.
22. Avocational Guidance.
23. Moral Guidance.
24. Recreational Guidance.

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[1] For terminology and definitions used in vocational education, see Chap. ii, *Administration of Vocational Education* by PAYNE, A. F., McGraw-Hill Book Company, Inc., New York, 1924.

## SPECIMEN DEFINITIONS

The following 17 definitions taken from the current literature of vocational guidance indicate quite clearly the varying points of view taken by the writers in the field.

The modern movement for vocational guidance and assistance may be looked upon as a movement for the *conservation of our human resources.*[2]

Vocational guidance is *a form of instruction* and examination to present trade information and guidance to pupils over twelve years of age.[3]

Vocational guidance is not a new function of education, but an old function which needs liberal extension. This extension, furthermore, lies within two well-defined fields: the first being *curriculum enlargement,* adjustment; and then, second, the *educational supervision* of those who have left the regular schools.[4]

One of the most vital services vocational guidance can render is to *analyze our industries* and train our youth to distinguish between a "vocation" and a "job."[5]

In general terms, then, the object of selection would be *to increase the output from the expenditure of any given amount of human energy,* or, put in the alternative form, to obtain a given output from the least possible expenditure of human energy. Briefly stated, the impartial idea at the basis of selection for vocations is *the reduction to the minimum of certain forms of waste.*[6]

Vocational Guidance is a serious attempt to make a complete and *definite plan for leading the boy successfully through the school, the industrial training experience, and, finally, in the life calling* in which he can live more happily and realize his most latent powers.[7]

The main object in vocational guidance is to guide the child in *the proper selection of electives;* of secondary consideration is the *elimination of failures.*[8]

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[2] LEAKE, A. H., *The Vocational Education of Women and Girls,* The Macmillan Company, 1918, p. 377.

[3] DOOLEY, W. H., *Principles and Methods of Industrial Education,* Houghton Mifflin Company, New York, 1919, p. 4.

[4] LEAVITT, F. M., in *The School Review,* vol. xxiii, Sept., 1915, pp. 482–3.

[5] LOVEJOY, O. R., *Bull.,* No. 14, 1914, U. S. Bureau of Education, Washington, D. C., p. 13.

[6] MUSCIO, BERNARD, *Lectures on Industrial Psychology,* E. P. Dutton & Company, New York, 1920, p. 104.

[7] MCKEEVER, W. A., *Training The Boy,* The Macmillan Company, New York, 1913.

[8] *The News Bulletin,* New York City Board of Education, Dec. 1, 1922.

Vocational guidance is, first, *a knowledge of one's own capabilities*, developed or latent; second, a knowledge of *the particular mental requirements of different vocations*.[9]

. . . And to every other artisan we assigned in like manner one occupation, namely, that *for which he was naturally fitted*, and in which, if he let other things alone, and wrought at it all his time without neglecting his opportunities, he was likely to prove a successful workman.[10]

Vocational guidance includes all efforts, under private and public control, and excluding the traditional activities of the home, the conscious and chief purpose of which is to achieve *the most economical and effective adjustment of young people to the economic employments* which they can most advantageously follow.[11]

Basing their efforts upon voluntary conference they have appealed to boys and girls to *continue their education* and to *make a careful choice of a vocation;* they have aimed to counsel, rather than to get or assign tasks; they have tried *to present the whole world of human occupations*, to the end that youth might choose for itself the path of useful service.[12]

My hope is that vocational guidance may become a regular service of the school to the public and that it may be *as scientific in applying psychology, sociology, and economics* as modern bridge building, animal breeding, and preventive medicine are in applying physics, biology, and bacteriology.[13]

By "vocational placement" I mean *fitting a job* to the attainments that a boy now has. By "vocational guidance" I mean *fitting a boy to a job* that he will at some future time be able to fill, if he follows the course of instruction outlined by his vocational adviser.[14]

Vocational guidance in its limited sense cannot be fully effective unless *supplemented by personal, moral, and social guidance.*[15]

Vocational guidance comprises two distinct types of functions—*educational functions* and *employment functions.* Although we are free to admit the impossibility of drawing any hard-and-fast lines between these two functions, it does seem to us quite clear that the major responsibility for educational functions should be assigned to the school system, while responsibility for placement should be taken by the employment system.[16]

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[9] MERTON, H. M., *How to Choose the Right Vocation*, Funk & Wagnalls Company, New York, 1917, p. 5.

[10] DAVIS and VAUGHAN, *The Republic of Plato*, A. L. Burt Company, New York.

[11] SNEDDEN, DAVID, *Vocational Education*, The Macmillan Company, New York, 1920, p. 580.

[12] RYAN, J. C., "Vocational Guidance and the Public Schools," *Bull.*, No. 24, 1918, U. S. Bureau of Education, Washington, D. C., pp. 7–8.

[13] THORNDIKE, E. L., in *Readings in Vocational Guidance* (Bloomfield, Meyer), Ginn and Company, New York, 1915, p. 102.

[14] BROOKS, S. D., in *Readings in Vocational Guidance* (Bloomfield, Meyer), Ginn and Company, New York, 1915, p. 83.

[15] THOMPSON, F. V., in *School Review*, vol. xxiii, Feb., 1915, pp. 105–12.

Vocational guidance is *a method of education*, applicable from primer to placement, and on through job experience, until supervision becomes unnecessary.[17]

Vocational guidance in the public schools involves the following purposes:

1. To assist principals and teachers in the education and guidance of pupils by means of *accurate measurement of their ability and special aptitude.*
2. To prevent hasty and unwise choice of occupations, *too early eliminations from schools*, and *unwise choice of studies.*
3. To insure to each child the *equality of opportunities* provided in the public schools of objectives to meet individual needs.
4. To *assist able, worthy, and ambitious pupils under financial difficulties* to continue their education.
5. To advise pupils *concerning opportunities for further education* and training beyond that which is provided in the public school, or concerning occupations and the requirements for success and advancement in them.[18]

## AN ANALYSIS OF 103 DEFINITIONS OF VOCATIONAL GUIDANCE[19]

The above definitions give some idea of the wide variety of opinion as to what vocational guidance consists of, and as to the purposes of vocational guidance.

For the purpose of arriving at the common factors and the common understandings in regard to the scope, objectives, aims, and methods of vocational guidance, the writer collected all available definitions of vocational guidance, samples of which have been given. There were 103 definitions. They were analyzed, and it was found that 241 varying items were included in them. A table was made of these 241 items under 18 main headings.

The results of this analysis were as follows:

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[16] REED, ANNA Y., in *Junior Wage Earners*, The Macmillan Company, New York, 1920, p. 72.

[17] STEWART, MARY, Director, United States Junior Employment Service, Sept. 12, 1922.

[18] ALLEN, R. D., in leaflet, *Program of Vocational Guidance*, Providence, R. I., 1922, pp. 1–2.

[19] For assistance in the checking the author has to thank Helen S. Gulick, a student in one of his classes.

1. *Choosing a vocation* appeared 35 times with 28 items, the most common, "choosing the one best fitted for," appearing nine times, and "the best field of service" four times.

2. *Occupational information* appeared 33 times with 26 items, the commonest, "to give information about industries generally," seven times; "qualities required for success in occupations," seven times; "opportunities for employment" four times: "opportunities for advancement," four times.

3. *An evaluation of the individual* appeared 29 times with 33 items, the commonest of which was "evaluating of special abilities," which appeared four times.

4. *Educational guidance* appeared 23 times with 13 items, the most common, "urge to continue education," appearing three times.

5. *A study of the industries* appeared 23 times with 30 items, the commonest of which were: "to analyze the industries," 12 times; "a survey of the world's work," eight times; "the requirements for entrance to the industries," three times.

6. *Self-discovery and understanding* appeared 21 times with ten items, the most common being "discovery of abilities," which appeared three times.

7. *Vocational guidance considered as vocational education* appeared 21 times, with nine varying items, the commonest, "to prepare for an occupation," appearing ten times.

8. *Methods of vocational guidance* was mentioned 17 times, with 12 items, the commonest, "that vocational guidance is a form of instruction," appearing seven times.

9. Suggestions as to *when guidance should be performed* appeared 14 times, each item appearing once.

10. Suggestions as to *who should do this guidance* appeared 14 times, with 28 items. The most common, "the individual himself," appeared nine times; the next, "by cooperation with other agencies," five times; and "vocational advisers or counselors," three times.

11. Vocational guidance *as a means of indicating necessary changes in school* appeared 12 times with 12 items, each appearing once.

12. *Placement* appeared ten times.

13. *Supervision after placement* appeared seven times.

14. *Promotions and adjustments* appeared seven times with four items.

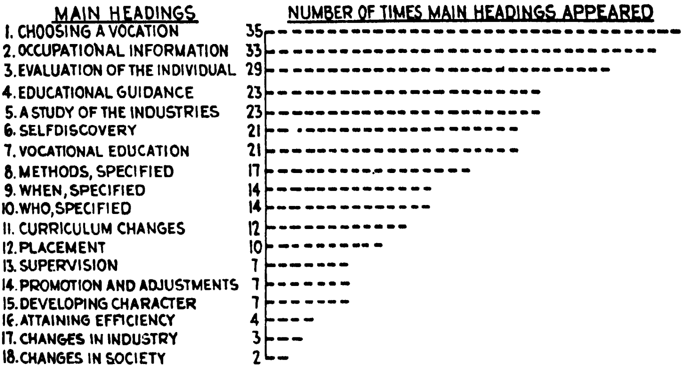
15. Vocational guidance as a *means of developing character* appeared seven times with five items, the most common being "to develop elements of character which make for success in life," which appeared three times.

16. Vocational guidance as a *means of attaining efficiency* appeared four times.

17. Vocational guidance as *a means of indicating the necessary changes in industry* appeared three times with three items, each item appearing once.

18. Vocational guidance as *a method of indicating the necessary changes in society* appeared twice with two items, each item appearing once.

Chart 1.—The Items Summarized



Another classification of the above 18 items could be made in terms of (1) ends, (2) means. With some slight over-lapping, the following numbered items would be classified under ends: Nos. 1, 4, 6, 7, 12, 14, 15, 16, 17, 18. Items under means: Nos. 2, 3, 5, 11.

### Questions

1. What is the difference between choosing a vocation and choosing a job, an occupation, a career?

2. What is the difference between occupational information and vocational information; "survey of the world's opportunities"; " a bird's-eye view of the world's work"? What is meant by the last two? Who would make this survey and give this bird's-eye view? Who would they give it to? How? What for? When? Of what would it consist?

3. What items would necessarily be considered in an evaluation of the individual for guidance purposes?

4. What is the difference between vocational guidance and educational guidance; economic guidance; social guidance; moral guidance; civic guidance; avocational guidance; physical guidance? Which is the more inclusive term? Suggest a term that includes all. (The writer suggests "life guidance.")

5. Outline a plan for a study of the industries. How many industries are there? Why not study the vocations? What is the difference between a vocation and an industry? An occupation? A job? A career? A profession?

6. State briefly what is meant by "self-discovery" and how it is to be done. Have you ever seen it done? Have you ever done it? Was it done once for all? At what age? Was it done in a classroom?

7. What is the difference between vocational guidance and vocational education? Does one include the other? If so, which one?

8. Make a list of methods used in guidance and choose which you consider the best. Have guidance methods changed during the past five years? If so, how? Are they changing at the present time?

9. Is there any one certain time when guidance should be done once for all for all children? For certain case groups? If so, when?

10. Who should practice guidance? Should they be specially trained? Why? What should they be trained in?

11. Is it a main objective of guidance to make curriculum changes or is that an incidental function? What groups are now trying to make curriculum changes? Are they succeeding?

12. In a complete plan of guidance where does placement belong?

13. The same for supervision?

14. The same for promotion and adjustments?

15. What part does or might guidance play in the developing of character? Give a specific example.

16. The same for attaining efficiency?

17. Is it a particular function of guidance to suggest changes in industry? What groups are now trying to make changes in industry? Are they succeeding?

18. The same for changes in society?

## VOCATIONAL GUIDANCE DEFINED

In the present state of development of vocational guidance along with other forms of guidance, it is not at this time possible to present one authoritative commonly accepted definition of vocational guidance. The following three definitions are presented as probably coming nearer to common practice and acceptance than any others:

1. In the mere choice of a vocation there are three broad factors: (1) a clear understanding of yourself, your aptitudes, abilities, interests, and ambitions, resources, limitations, and their causes; (2) a knowledge of the requirements and correlations of success, advantages and disad-

vantages, compensation, opportunities and prospects in different lines of work; (3) true reasoning on the relations of these two groups of facts.[20]

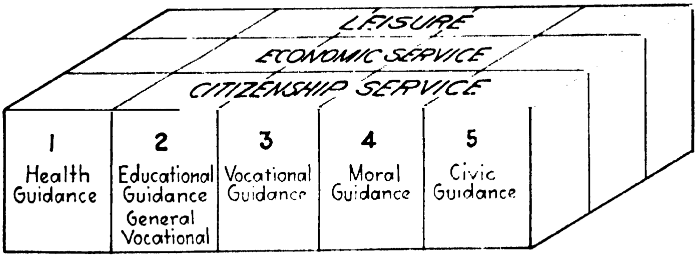
2. A systematic effort based on knowledge of the occupations and personal acquaintance and study of the individual, to inform, advise, or cooperate with a person in choosing, preparing for, entering upon or making progress in his occupation.[21]

3. Vocational [and educational] advisement is a scientific process whereby from time to time individuals and their characteristics are tested, measured and evaluated, then advised concerning the lines of work [and other endeavor] wherein their individual development and opportunity for service is likely to be the greatest.[22]

## VOCATIONAL GUIDANCE AS ONE PHASE OF LIFE GUIDANCE

Even a casual reading of this chapter will develop the fact that there is much confusion regarding the terminology and definitions used in guidance. It is quite evident that no one kind of guidance can be performed without in a greater or less measure affecting other kinds of guidance. A term must be found that is broad enough to include all the others and still allow the narrower terms to be used for the more specific phases of the work, somewhat on the basis of Chart 2:

CHART 2.—LIFE GUIDANCE



1. *Health guidance* is placed first, because without good health the average individual is a liability instead of an asset, both to himself and to society.

2. *Educational guidance* includes all forms of education and training and is placed second because in our increasingly complex

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[20] PARSONS, F., *Choosing a Vocation*, Houghton Mifflin Company, New York, 1909, p. 5.

[21] BREWER, J. M., *The Vocational Guidance Movement*, The Macmillan Company, New York, 1919, p. 291.

[22] PAYNE, A. F., *National Vocational Guidance Association Bulletin*, vol. i, No. 7, Harvard University Press, Cambridge, Mass., Feb., 1923, p. 104.

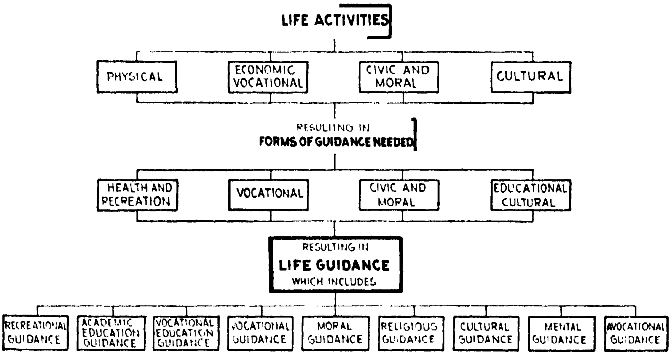
social order the age of infancy is steadily lengthening and education and specific training are becoming more and more essential.

3. *Vocational guidance* here means guidance toward economic efficiency and includes all the items found in Chapter IX which gives a complete plan of vocational guidance toward economic efficiency.

4. *Moral guidance* is placed fourth because it is felt that it is based upon successful health, educational, and vocational guidance.

5. *Civic guidance* is placed last because it is the more inclusive term and in many respects includes or is based upon all the others.

CHART 3



*Citizenship service* is placed first as an objective of life guidance, because that is of the first importance to society and to the happiness of the individual as a unit in and of society.

*Economic service* is placed next as an objective of life guidance, because it is one of the fundamental laws of our present social order that each normal individual must be able to carry his own economic load after the period of infancy has passed. Furthermore, the individual must not only carry his own economic load but also produce a surplus. We must not forget that *the ability to earn an adequate livelihood is the first essential of good citizenship.*

*Leisure* is placed last because that is more largely an individual matter and should not receive the major emphasis until the individual has earned the right to it by adequate citizenship service and the liberty and leisure for it by efficient economic service.

Some justification for the foregoing proposals may be found in a study of Chart 3.

It will, of course, be understood that, on account of the vagueness to the non-specialist of some of the terms used, there is some real and more apparent over-lapping in the above classifications.

# CHAPTER IV

# THE PRINCIPLES AND ASSUMPTIONS OF VOCATIONAL GUIDANCE

In the various fields of education we are continually referring to the "fundamental principles" of whatever topic may be under discussion at that particular time. Rarely is it possible to obtain from any source or person a brief definite statement of any of these fundamental principles that are assumed to be so important and to which so many casual references are made.

The above statement is particularly true in the fields of vocational education and vocational guidance. This chapter on the Principles and Assumptions of Vocational Guidance is presented as a substitute for a possible chapter on the Philosophy of Vocational Guidance.

The following statement of the principles and assumptions of vocational guidance are grouped under these main headings:

I. Certain Psychological Principles and Assumptions of Vocational Guidance: The Needs of the Individual for Guidance.

II. The Social Principles and Assumptions of Vocational Guidance: The Needs of Society for the Guidance of Its Members.

III. The Economic Principles and Assumptions of Vocational Guidance.

IV. The Administrative Principles and Assumptions of Vocational Guidance.

## I. CERTAIN PSYCHOLOGICAL PRINCIPLES AND ASSUMPTIONS OF VOCATIONAL GUIDANCE: THE NEEDS OF THE INDIVIDUAL FOR GUIDANCE[1]

1. Vocational guidance recognizes the importance of *individual differences*, in abilities, capacities, and aptitudes, and the development of the individual along the line of these differences for the

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[1] See JENNINGS, WATSON, MEYER and THOMAS, *Suggestions of Modern Science Concerning Education*, The Macmillan Company, 1921. GODDARD, H. H., *Human Efficiency and Levels of Intelligence*, Princeton University Press, Princeton, N. J., 1920. TANSLEY, A. G., *The New Psychology and Its Relation to Life*, Allen and Unwin Company, London, 1920.

benefit of society in terms of service, and for the benefit of the individual in terms of happiness.

2. Vocational guidance and vocational education satisfy many of the *peculiar needs of adolescent youth* that the ordinary traditional school work in large measure neglects.

3. That through working in the various types of try-out courses (both in and out of school) with tools, processes, and materials, comparing the results with established concepts, making continual modifications and adjustments in terms of life-career motives, the powers of associative, selective, and analytical thinking are exercised.

4. *Vocational guidance for a specific vocation should not take place too early in the development of the individual.* The capacity for the coarser adjustments matures earlier in life than that for the finer adjustments. Only the more general forms of life guidance should be given before the individual is well along in the adolescent period.

5. The public schools, as at present organized, specialize in the "why you do," or knowledge activities, "why you should do it," or aspirational activities, and in a measure neglect the "how you do it," or skill activities, except in the higher levels of professional work, such as dentistry, architecture and engineering. They have almost wholly neglected the skill activities in the lower levels of production, into which a large proportion of our young people must necessarily enter.

6. Self-activity is necessary to all learning. Self-activity is determined quite largely by interest and motivation. Many pupils leave school because of lack of interest in, or capacity for, the formal traditionalized abstract studies. Vocational guidance is nothing more nor less than a systematic attempt to discover the lines along which all individuals at different age and intelligence levels can be self-active with the greatest benefit to themselves and to society.

7. The tendency of present education seems to be decidedly toward motivation and socialization. In the final analysis this inevitably means vocationalization with its accompanying corollaries of vocational guidance and vocational education.

8. Genuine interests are active, projective, propulsive, objective, and personal. Vocational guidance furnishes an avenue for the exercise of these interests. *The self-expressed interests of the adolescent youth should not be used exclusively as a basis for*

*guidance. The stimulus to think or work through a problem is greatest when the difficulties stimulate rather than depress.* This stimulus is often helped through life-career motives. These life-career motives, so strong in vocational guidance, are among the most powerful of motives in education at certain stages between the ages of 12 and 30, because the individual identifies himself with the proposed course of action.

9. Motivation creates values in the thing being done or learned. *The life-career motive, or economic motive, is one of the strongest of human motives* functioning in the field of education.[2]

10. Interest in the thing being learned makes it more purposeful, more readily learned, more easily retained and recalled. The life-career motive is an important factor in the development of interest.

11. The doctrine of individual differences leads us not to expect the same reaction from all pupils, even though the stimulus be exactly the same. Education in the past has quite largely failed to recognize the existence of the validity of individual differences, except to eliminate those individuals who failed to meet the formal requirements set up by the school system.

12. Vocational guidance is based upon a recognition of individual differences, *the requirements of society for service of various kinds*, and the necessity for varying kinds of education to satisfy the varying demands of society.

13. The life-career motive, or economic or vocational motive, when found, *conforms to the requirements of method* in that the pupils have provided for them a genuine situation, a continuous activity in which they are interested for its own sake; and that a genuine problem develops within the situation as a stimulus for thought and a motive for action.

14. "The guiding thesis of modern education is that it should include nothing simply because tradition alone recommends it or because its inutility has not been conclusively established. *Education should include nothing for which an affirmative case cannot now be made out.*"[3] Vocational guidance, through its elements of placement, supervision, and follow-up, will be able to check the results and measure the effectiveness and functioning

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[2] ELIOT, C., *The Life Career Motive in Education*, Houghton Mifflin Company, New York, 1913.

[3] FLEXNER, A., *A Modern School*, General Education Board, New York, 1916, p. 17.

of the education given to individuals and groups and to recommend readjustments in our educational offerings for these groups and individuals at the various age and intelligence levels.

15. The doctrine of formal discipline or the transfer of training has been displaced by *the newer doctrine of special training*, which is, that for special ability in any line of activity the training must be given in that line. It has been proved that there is transfer of training from one line of activity to another only in the proportion in which the elements of the activity are identical. This is merely another way of denying the fact of transfer of training. This develops into one of the fundamental principles of vocational education and vocational guidance. It is now becoming increasingly vital to the individual that he choose the specific line of activity for which he is best fitted. This is especially true when he is on the eve of entering wage earning or entering on education for wage earning. *We can no longer educate individuals upon the fallacious assumption that training acquired in one line of activity can be transferred to a different line.*

16. The foundation of all learning is based directly upon the accumulated experiences of the learner. The learner must use the experiences which he has had in interpreting the new experiences, and applying the new knowledge. The new psychology teaches us that individuals acquire information and skills along the lines of their capacities and interests. Vocational guidance, by evaluating these capacities, abilities, and interests, indicates the line of education and learning that individuals can most profitably pursue.

17. We learn best and most readily those things we like best and can do best, and which bring the most pleasant results. *Psychology teaches us that we learn best and like best those activities for which we have the greatest inherent capacity and ability.* Vocational guidance aims to discover at the entrance levels these inherent capacities and abilities, and indicates the most profitable line of learning.[4]

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[4] DEWEY, J., *Interest and Effort in Education*, Houghton Mifflin Company, New York, 1913.

## *II. THE SOCIAL PRINCIPLES AND ASSUMPTIONS OF VOCATIONAL GUIDANCE: THE NEEDS OF SOCIETY FOR THE GUIDANCE OF ITS MEMBERS*[5]

18. Our present form of civilization is that of a socialized democracy. *Such a civilization needs all forms and types of service.* The mere fact that an individual is discovered to be best fitted for one form of service instead of another places no stigma upon that individual so long as he performs that service to the utmost level of his ability.

19. Our democracy demands *a thoroughly democratic form of education, in which every type of individual can secure that form of education and training which will develop his capacities to the utmost,* and enable him to give the greatest measure of service to society.

20. Society, in its schools and life activities, must offer opportunities for all individuals to develop their capacities to the highest possible point within the limits of the resources available for this purpose.

21. It is true that within limits there is one best person for every job. Each person is better adapted for work in some one vocational field than in some other. It is the function of guidance to discover and bring together the right person to the right life activities, so far as is humanly possible.

22. From the standpoint of social and economic efficiency it is ideally desirable that we have *some means of discovering the one best person for each form of service that society demands,* and place that person in that form of service.

23. The provision of complete and systematic *vocational guidance would be an expression of the belief in equality of opportunity* for a fitting education for all types and classes of individuals living in a democracy.

24. Vocational guidance is an *important part of our present comprehensive plan for a democratic form of education suitable* for the type of democracy we have at present. This comprehensive plan of education includes the following:

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[5] See Dewey, J., *The School and Society,* University of Chicago Press, Chicago, Ill., 1909. Gillette, J. M., *Vocational Education,* American Book Company, New York, 1910. Munroe, J. P., *New Demands in Education,* Doubleday Page & Company, New York, 1912. Weeks, M. R., *Socializing the Three R's,* The Macmillan Company, New York, 1919.

(a) *Education for citizenship service.*—Common to and required of all up to a minimum of about the sixth grade.

(b) *Education for Economic Service.—The ability to earn an adequate livelihood is the first essential to good citizenship,* and is equally essential to the individual and to the state. Training for economic service will begin at an earlier age for some, a later age for others, depending upon many factors of heredity and environment of the individual, his capacities and abilities, but for no one under the age of 14. There will also be wide differences in the form of economic service. The capacities, limitations, and abilities of the individual will inevitably determine not only the form of economic service but also the grade or level of that economic service.

(c) *Education for Leisure Activities.*—At the present time our school system, especially above the elementary grades, is largely education for personal culture and civism, which function largely outside of those hours devoted to vocational activities. It must sooner or later be recognized that education for leisure should come only after the individuals have earned the right to it by citizenship service, and earned the leisure for it by economic service, and then we have the great question as to whether education for leisure should be chargeable to the public or to the individual.

25. Vocational guidance is not as necessary in education for citizenship as is civic guidance. There should be no choice in that matter. Specific vocational guidance will function most fully in education for economic service. This in itself will be an explanation of the present emphasis on vocational guidance as distinguished from educational, social, civic, physical, moral, ethical, and aesthetic guidance. Guidance in the field of leisure education is largely a matter of individual choice.

26. Vocational guidance is founded upon the basic principle of necessity for education for complete citizenship in a democracy such as ours, wherein all kinds of service are essential and required, should be prepared for, rewarded, and honored.

27. Vocational guidance assists materially in the fullest development of each individual to the limit of his capacities, to the ultimate end that he is better prepared for service to society, better able to carry his own economic load, produce a surplus, be more efficient in service, and become self-reliant and self-respected.

28. *Our present American democracy is becoming more and more industrial in character.* The 1920 census gives the following

percentages of our population employed in the corresponding vocational fields:[6]

TABLE II

| | PER CENT |
|---|---|
| Manufacturing and mechanical industries | 30.8 |
| Agriculture, forestry, and animal husbandry | 26.3 |
| Trade and barter (commerce) | 10.2 |
| Domestic and personal service | 8.2 |
| Clerical occupations | 7.5 |
| Transportation occupations | 7.4 |
| Professional service | 6.25 |
| Extraction of minerals | 2.6 |
| Public service | 1.75 |

29. *Efficiency in production is absolutely necessary to the best maintenance of any society.* Therefore, any plan of education should include, as an essential part of that plan, education for production. Selection is necessary in bringing about the education of the right individual for the right form of production and service.

30. The employment manager in business and industry is interested in vocational selection, while the educator of youth is interested *not only in vocational guidance but life guidance.* This means that we must effect the fullest development of each individual and obtain recognition of his potentialities and capacities, with the fullest opportunities for education and for service to society along lines which will develop that individual to his highest capacity.

31. *A democratic form of education is based upon equality of educational opportunity.* This does not mean in any sense opportunity for all to take one form of education arranged for one class, but equal opportunities for *a fitting education* for all types of individuals and all classes of society. Paralleling this form of education we must also have a scientific and systematic form of guidance covering all elements of the individual, the vocations, education, and society.

32. This democratic form of education must still more diversify some of its offerings, especially for the 14-year olds, and its methods of teaching and administration, to meet in the best possible way the known diversities of its human material and the recognized diversity of the service needs and demands of society.

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[6] "Population: Occupations," vol. iv, *Fourteenth Census of the United States*, Bureau of the Census, Washington, D. C., 1920.

33. In a democracy it is necessary that we have a conscious effort on the part of the state toward the shaping of the ideals, attitudes, and behavior of its citizens to secure the maximum of service, to promote social cohesion, and to maintain the permanency of its institutions, all of which call for a definite system of vocational guidance under public and state control unless other agencies can do it better.

34. Vocational guidance is desirable as an effective agency in the promotion and the control of the general economic and social welfare.

35. *A democracy is governed and controlled from within.* This means that all individuals and all separate groups must be educated to the maximum along the lines of their greatest service and the development of right ideals.

36. An efficient system of vocational guidance will prove, we hope, to be an important agency in solving many of the present problems of industrial and social unrest.

37. *The state must control the steadily lengthening period of social infancy and social adjustment.* This can only be done by a state system of vocational guidance. The increasing complexity of our modern, social—industrial order makes this increasingly necessary.

38. It is certain that we have not as yet attained the best form of human organization, but that we are progressing in the direction of better ones. *Scientific guidance is an important agency in social progress.*

39. Social progress can be attained only through the social adjustments of individuals to their environment.

40. Life guidance of youth is an important part of the continuance of our present developing social order and its ultimate development into something better and finer.

41. Social progress depends in large measures on the production of goods and wealth. Wealth can only be accumulated when individuals are producing a surplus. More efficient production and greater individual happiness and satisfaction can best be attained through better guidance, better education, and better selection, resulting in more efficient service of individuals.

42. Vocational guidance and vocational education should bring about the improvement of the individual and his powers of service. This means a similar improvement in the groups to which he belongs, and ultimately to society as a whole.

43. *Vocational (and educational) guidance is the machinery whereby we can attain to a much greater measure of equalization and of social justice in education.*

## III. THE ECONOMIC PRINCIPLES AND ASSUMPTIONS OF VOCATIONAL GUIDANCE[7]

44. In our present social and economic order it is becoming increasingly *necessary that every individual bear his own economic load and produce a surplus.* Vocational guidance coupled with vocational education seeks to assure that each individual will be able to do this more efficiently.

45. Complete vocational guidance would subserve the common interests of individuals, of employers, of consumers, and of society generally.

46. Vocational guidance coupled with vocational education tends to increase incomes, in that each individual will produce more or will produce the same with less effort, making it possible for him to obtain greater rewards.

47. Vocational guidance assists materially in that *chief purpose of living beings to keep on living.* It assists materially in economic self-preservation.

48. The supreme command of nature is "be strong." *The one great virtue is "be strong."* Vocational guidance with vocational education makes individuals much stronger economically. It also prolongs the economic life of the individual.

49. When human energy, capacity, or power is allowed to go to waste, or is not used in the most efficient manner, society weakens itself to that extent. The great function of vocational guidance is to eliminate the waste of human capacity, energy, and power.

50. In our present social order the real struggle is to see who can become the most productive, and the prizes of life are awarded accordingly. Men succeed only by means of the instruments of production and are rewarded in proportion to the services they render and the values society places upon their services.

51. It is one of the functions of government to distinguish between economic and uneconomic activities for the prime pur-

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[7] See CARVER, T. M., *Essays in Social Justice,* Harvard University Press, Cambridge, Mass., 1915. SELIGMAN, *The Economic Interpretation of History,* Columbia University Press, New York, 1922. CARVER, T. M., *The Economy of Human Energy,* The Macmillan Company, New York, 1924.

pose of promoting the economic and suppressing the uneconomic. A system of vocational guidance is most decidedly an economic activity and, therefore, should be promoted by the state.

52. In a democracy such as ours it is desirable that there be some methods of discovering, evaluating, training and offering opportunities for service for every kind of capacity and talent. This is the function of vocational guidance.

53. It is a method of discovering and placing the one best person on the one best job.

54. It will materially shorten the period of learning the vocation.

55. Vocational guidance will tend to develop the personality, the self-respect, and the confidence of individuals.

56. Vocational guidance will give to the physically weak a greater measure of equality and increase the economic security of all workers. It will tend to decrease in both education and production the cost of supervision.

57. It will increase production with a less expenditure of effort. It will raise the quality of the product, and reduce spoilage.

58. It will increase the stability of labor, reduce accidents, and reduce the cost of production.

59. One of the first duties ot any state is to help conserve all its resources—material resources, such as land, forests, mines; human resources; and spiritual resources.

60. Neither a democracy, nor any other political group, can pick, choose, and discard its human material. *One of its valuable resources is the undiscovered and undeveloped capacities of its potential citizens.* Vocational guidance aims systematically to isolate and evaluate all forms of capacities in human material to indicate the best form of education for each to the two ends of greater service to society and the ultimate end of the greater happiness of the individual in that service.

61. In every society we find all sorts, kinds, and degrees of humanity with varying quantities and qualities of abilities, capacities, limitations, and assets. "Nature knows no equality." *A democracy needs many kinds and degrees of ability, talent, and service.* This must be recognized in our system of education, and guidance is essential in guiding the right individual through the right form of education to the right form of service.

62. It is, then, the moral duty of any state to recognize, conserve, train, develop, and make use of every form of aptitude,

talent, capacity, and ability, and at the same time to recognize weaknesses, disabilities, liabilities, and limitations, so far as it can. This is what systematic guidance aims to do.

63. The present state of our society, with the rapidly rising standard of living, the increasing high cost of living, the dissipation of our natural resources—all bringing about the demand for greater efficiency in production, distribution, consumption, and service—indicates very clearly that we must conserve, educate, and develop more the ability to produce efficiently.

64. A democracy must offer opportunities and incentives for the discovery, evaluation, development, and practice, in service, of all forms of individual capacities, interests, and aptitudes. This requires an organized system of vocational guidance and vocational education, leading to the most efficient forms of vocational education and vocational service.

65. Progress in nature and in society is made through selection, elimination, and differentiation. *There is no one form of education best for all people.* In a democracy there must be many forms of education. The kind of education that best prepares one individual for college does not necessarily best prepare another individual for life or for earning a living. Vocational guidance will develop the necessity for a much wider variety of educational offerings then we have at present.

## IV. THE ADMINISTRATIVE PRINCIPLES AND ASSUMPTIONS OF VOCATIONAL GUIDANCE

66. In a democracy such as ours there can be *no recognition or limitation of classes by class legislation or class education*, as classes are now conceived and recognized. The foundation of democracy is a recognition of the rights, abilities, and capacities of each individual with the fullest opportunity for that individual to develop to the utmost. This is one of the foundation principles of vocational guidance. Our educational system of the past, above the elementary grades, has violated the above principle in that it recognized and was designed for only one class of our population, those able to go to college.

67. The offerings of any democratic and public school system must be *diversified in such a manner as to provide the fullest opportunity for a fitting education*, for all types of students, regardless of color, creed, social or economic status, or intelligence level.

68. The various curricula or courses of the schools within the public school system should be so organized as to allow the program of each student to be *properly balanced in regard to the three main divisions of education*: (*a*) education for citizenship service, (*b*) education for economic service, (*c*) education for leisure activities.

69. In general, the curricula of the public school system should be organized as follows:

(*a*) Minimum essentials for civic service required of all up to the sixth or seventh grade.

(*b*) Differentiated and diversified curricula organized on the basis of the main divisions of our social activities and needs on the basis of individual differences and needs—these in the seventh, eighth, ninth, and tenth grades.

(*c*) Specialized curricula of various lengths for students of the ages 15 to 20 upward. These should prepare, as desired and needed, for entrance to some specific activity, such as entrance to some specific college and specified course in that college, to technical schools, to apprenticeship courses, to long-term vocational training courses, to short-term training vocational courses.

70. It should be accepted, ultimately, as fundamental and essential that *before any student is admitted to a definite vocational education course he or she should be submitted to both diagnostic and informative forms of vocational guidance*, either in or out of school, and a choice made of vocation as a result of this guidance. The main reason for the present weakness of our system of vocational education is because this principle has been violated.

71. That all curricula should be so organized that *every student is fitted for some definite activity by the end of high school or before*. This activity may be attendance at college or technical school or effective entrance to apprenticeship or practice in some vocation.

72. *That no individual should be allowed permanently to sever connection with the public school system until he has been placed in possession of some marketable skill or knowledge.*

73. Guidance consists not only of advising individuals concerning their life activities, but also in preparing them to make a fitting entrance to their vocational activity, placing them in the vocation and supervising them there until assured that they are making progress so far as their limitations will permit.

74. *For systematic vocational guidance it is necessary that comprehensive and cumulative records* be kept for every student in our public schools. These records should cover all phases of the personal, intellectual, and environmental life of the individual that have anything to do with determining his career.

75. *The advisers should never dictate the choice*—they should do no more than outline the probable chances of success or failure along certain lines.

76. Ideally, vocational placement should come only after a decision has been reached that no further advantages will accrue to the student or to society by that individual remaining longer in school. Furthermore, *placement should be made only after the individual has been given specific training* that will enable him to make the most effective entrance to that vocation.

77. Vocational guidance should be done only on a basis of scientific data concerning the individual, all phases of his subjective and objective environment, a knowledge of the opportunities for service, the requirements of entrance to that service, and the methods of meeting those requirements. This data should be secured by scientific analysis of the individuals and occupations. At the present time there seems to be a tendency to over-emphasize the value of psychological tests. A complete guidance program should survey the social, emotional, temperamental and economic phases of the individual as well as intelligence and success in school work.

78. Vocational guidance may be conceived as consisting of four major divisions: (*a*) *a thorough-going analysis of the individual;* (*b*) *a thorough-going analysis of the vocations;* (*c*) *a thorough-going analysis of the educational offerings* that will prepare for entrance to those vocations; (*d*) *an individual guidance prescription based on these analyses.*

79. A scientific method should be developed for (*a*) making these analyses; (*b*) testing, measuring, and evaluating individuals; (*c*) routing individuals through the system; (*d*) placement in employment; (*e*) supervision, adjustment, and progress in employment.

80. Eventually, no regular students in our public schools should be allowed to enter upon any prevocational or vocational course until they have passed through the system of vocational and educational guidance and advisement.

81. After these students have passed through the advisement system and have been advised, *they are perfectly free to follow or reject, in whole or in part, the advice given.*

82. All advice should be checked wherever possible by tryout courses within the school, and by vacation and after-school activities, before the final choice is made.

83. *The system of follow-up* must function after the student has entered employment. The objectives of the follow-up system are: (*a*) to check up on advice given; (*b*) to test the efficiency of the vocational education given; (*c*) to assure that the student is given the fullest opportunity to make progress, and to make adjustments that may be essential to that progress. Supervision should be continued until the student is at least 18 years of age.

84. An *adequate system of records covering all phases of the student's career* from infancy until the age of 21 should be maintained to furnish: (*a*) a basis for advisement; (*b*) a basis for adjustments; (*c*) data for changes in the advisement, training, and placement systems, etc.

85. The various vocations call for various qualifications. They have differing requirements and limitations, differing entrance requirements. These must be recognized so that the right individual may be selected and trained for efficient service in these vocations.

86. One of the functions of guidance is to help adapt the schools and their various curricula to, first, the needs of society; second, the needs and capacities of the individual.

87. Although it is true "it is not possible to make the most of any student vocationally until we have made the most of him educationally," the education of the student should have as an ultimate objective economic service in some vocation.

88. The workers in the guidance field should: (*a*) pay more attention to other forms of guidance, *i.e.*, civic, moral, educational, social; (*b*) remove the present over-emphasis on placement in industry and business; (*c*) collate and disseminate, for the purposes of guidance counselors, the data recently developed in the fields of psychology, sociology, economics, and secondary education.

89. *The entire life-guidance system in all its elements should be an integral part of the regular public school system.* While the assistance and cooperation of other interested organizations

are welcome, the final authority and responsibility for all non-family phases of the work rest with the administrators of the public schools.

90. No matter how complete the analysis of an individual's capacities, qualifications, and potentialities may be, it will be useless unless it is accompanied by complete job analyses and specifications of the qualities and capacities required for success on a wide variety of carefully designated vocations.

91. Guidance, except in care cases, cannot be done once for all. It is necessary that *guidance be looked upon as a recurring process* at certain points or levels in the individual's progress.

## CASE PROBLEM

### Stay in School

The following is the entire contents of a leaflet entitled "Stay in School. Education Pays." It is a message to the boys and girls of America, issued by the Children's Bureau, United States Department of Labor, in cooperation with the Child Conservation Section of the Council of National Defense.

*Boys and Girls Stay in School!*

Train for the Future!

"1. Children should stay in school as long as possible because *education means better jobs.*

"Boys and girls who go to work at the end of grammar school rarely get good jobs. The work they find to do is usually unskilled. It offers little training or chance for advancement. When they are older, they find that they are still untrained for the skilled work which offers a future. *Education means higher wages.*

"2. Many boys and girls, when they leave school, find work that offers a high wage for a beginner. But these wages seldom grow, because the work requires no training.

"3. A position with a future and steadily increasing wages requires school training.

*Here Is the Proof:*

"4. This table (prepared by the United States Bureau of Education) compares the wages of a group of children who left school at 14 years of age with another group who left at 18 years of age.

TABLE III

| AGE | EARNINGS PER WEEK OF CHILDREN WHO LEFT SCHOOL AT 14, THE END OF GRAMMAR SCHOOL | EARNINGS PER WEEK OF CHILDREN WHO LEFT SCHOOL AT 18, THE END OF HIGH SCHOOL |
|---|---|---|
| 14 | $ 4.00 | |
| 15 | 4.50 | |
| 16 | 5.00 | |
| 17 | 6.00 | |
| 18 | 7.00 | $10.00 |
| 19 | 8.50 | 10.75 |
| 20 | 9.50 | 15.00 |
| 21 | 9.50 | 16.00 |
| 22 | 11.75 | 20.00 |
| 23 | 11.75 | 21.00 |
| 24 | 12.00 | 23.00 |
| 25 | 12.75 | 31.00 |
| | Total salary till 25 years of age, $5,112.50 | Total salary till 25 years of age, $7,337.50 |

"At 25 years of age the boy who had remained in school until 18 had received over $2,000 more salary than the boy who left at 14, and was then receiving over $900 a year more.

"This is equivalent to an investment of $18,000 at 5 per cent. Can a boy increase his capital as fast any other way?

"From this time on the salary of the better educated boy will rise still more rapidly, while the earnings of the boy who left school at 14 will increase but little.

"Although the wages paid now are much higher than when this study was made, the comparison remains the same.

*Does It Pay to Continue Your Studies?*

"5. Education means a successful and useful life. It pays the individual.

"6. Education means efficient workers. It pays the nation. Show this to your parents and ask them what they think about it.

*Stay in School!*"

### Questions

1. Are the statements contained in the first two paragraphs true as they stand? Are they true for all children and all kinds of education? Are they true for some children and some kinds of education? Are they true for all children and any kind of education? What qualifications are necessary?
2. What is the fallacious assumption of paragraph 2?
3. Is the statement contained in paragraph 3 true? If the statement is true, when should the school training be given?
4. What is the fallacy upon which this table is based?
5. Are statements 5 and 6 true?
6. What principles of guidance are involved in this case problem?

## CASE PROBLEM

### EMPLOYMENT CERTIFICATES IN PROVIDENCE, RHODE ISLAND

The 1920–21 report of the agent in charge of the issuing of employment certificates in the City of Providence, Rhode Island, gives the following statements:

"1. The total number of children between the ages of 12 and 16 was 7,918.

"2. On January 1, 1921, there were 4,157 employment certificates in force, 1,558 held by children between the ages of 14 and 15, and 2,599 held by children 15 years of age or over.

"3. The 4,157 certificate-holding children were in the following grades at the time the certificates were granted:

TABLE IV

| | |
|---|---|
| High school | 678 |
| Grammar graduates | 541 |
| In eighth grade | 586 |
| In seventh grade | 925 |
| In sixth grade | 796 |
| In fifth grade | 245 |
| In fourth grade | 92 |
| In third grade | 4 |
| In ungraded classes | 90 |

"4. The report of the truant officer shows that there were 171 cases taken to court—154 boys, 17 girls—distributed by ages as follows:

TABLE V

| | |
|---|---|
| 8 years of age | 7 |
| 9 years of age | 12 |
| 10 years of age | 18 |
| 11 years of age | 24 |
| 12 years of age | 37 |
| 13 years of age | 38 |
| 14 years of age | 29 |
| 15 years of age | 6" |

### Questions

1. What is the significance of items 1 and 2 to the guidance worker?
2. What conclusions might one draw from the distribution in item 3?
3. What is the relationship between the distribution in items 3 and 4?
4. Where should guidance begin in the city of Providence?
5. What principles of guidance are involved in this case problem?

## CASE PROBLEM

### HIGH SCHOOL MORTALITY

The Report of the Superintendent of Schools, New York City, 1920–22, High Schools, pages 99–100, presents the following:

### *High School Mortality*

"During the year a thorough study has been made of the "mortality" of first-year classes which has occasioned much comment by members of the Board of Education and citizens interested in the schools. Every principal submits the results of his investigation. A very general agreement has been reached as to the following causes which account for the failure of pupils to continue in school:

"1. Economic pressure at home.

"2. Failure of parents to value the high school training.

"3. Personal desire of pupils to get into active business life, or to attend a business school.

"4. Attainment of age entitling to employment. Many pupils who anticipate entering business remain in high school only long enough to meet the requirements of employment laws. Allied to this is the expectation of the pupil to obtain a more desirable position at higher wages if he applies for employment as a high school pupil rather than only an elementary school graduate.

"5. Failure in mastering the subjects of the course of study chosen due to misplacement.

"6. Failure to adapt himself to a new and untried system of organization and instruction.

"7. Excessive absence or illness and unfavorable conditions at home for study of prepared home work.

"8. Part-time school attendance and lack of study periods under teacher guidance. Incidentally, lack of opportunity to engage in all the activities in school, which supplement regular school work and which contribute to school spirit.

"9. Many principals account for the failure of pupils in their work to poor preparation in elementary schools and to lack of training in proper methods of study and application."

### Questions

1. Are high school principals as a group disinterested competent investigators of such a problem when it concerns their own schools?

2. What evidence have we at hand to raise doubts concerning "economic pressure at home" as the most important reason why high school pupils leave the high school?

3. Why do parents fail to value the high school training? Is it equally valuable for all students? For what group is it of most value? For what group is it of little value? Should all 14- to 18-year olds attend some high school if possible? Some particular high school?

4. Is it a bad thing that pupils have a personal desire to get into active business life? How does it happen that this desire has developed?

5. The largest group of students in the New York City schools that received employment certificates in the period September 1, 1921 to May 31, 1922, are as follows:

| By Grade Attained | | By Age | |
|---|---|---|---|
| Grade 7A | 4,336 | Just 14 years | 4,564 |
| Grammer graduates | 6,474 | Just 15 years | 14,234 |
| High school 1A | 3,160 | Just 16 years | 2,968 |

The total number issued (first applications) was 21,766. Is it such a serious matter that they do go to work at these ages and grades? Is it a natural or an unnatural procedure? What is it that we object to?

6. Is there any system which will assure all students being properly placed in high schools? Where is it being used?

7. Why do students "fail to adapt themselves to a new and untried system of organization and instruction?"

8. Is the school at all responsible for "excessive absence and illness" and unfavorable conditions for study at home?

9. Should part-time school and work tend to keep the student in school or tend to take him away? What are the economic advantages of such an arrangement? The educational advantages?

10. Is item 9 generally true? What methods do we have of proving or disproving it? What proportion of high school work is organized in sequence with grammar school work? Is it a function of the grammar grades to train in proper methods of study?

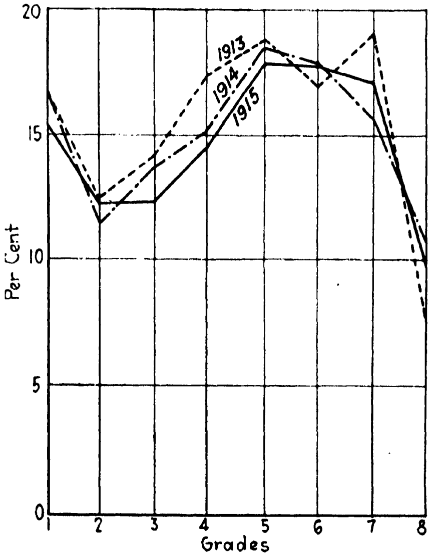
11. Which principles of guidance are involved in this case problem?

## CASE PROBLEM

### NON-PROMOTION CHARTS

On page 139 of the summary volume of the Cleveland School Survey, Leonard P. Ayres, Russell Sage Foundation, New York City, 1917, the following chart is presented showing *the per cent of failures in each grade for three successive June promotions:*

CHART 4



### Questions

1. Of what value is such a chart to the guidance counselor?

2. How would you go about obtaining such a one for your school system?

3. What are the fundamental causes for the high peak at grade 5?

4. What is the explanation of the valley at grade 2?

5. How do you explain the high percentage of failures in the first grade?

6. Which of the peaks and valleys are of significance to the guidance counselor?

7. What explanation have you to offer for the sharp rise at grade 7 for the year 1913?

8. Explain the steady rise in non-promotion for all three years from the second to the fifth grade.

9. What fundamental principles of guidance are involved in this case problem (see statement of principles).

10. Our school systems function in many ways; of which particular function is the chart good evidence?

## CASE PROBLEM

### The Veterans' Bureau

In the New York District of the Veterans' Bureau there are about 17,000 men in training and a large proportion of them are "in wrong"—assigned training in occupations for which they are in no way fitted, and in which they can never hope to succeed. It is costing the Government on the average about $2,500 per man per year, and on hundreds of these men as much as $7,500 has been wasted in fruitless efforts.

For the New York subdistrict covering the territory adjacent to New York, with about 3,000 trainees, there is a vocational committee of five men who do nothing else but consider readvisement cases. They probably handle on an average ten cases a day. They have been at this work since January 1, 1923, and are going full speed and there is no end in sight.

### Questions

1. What are the fundamental bases of the general dissatisfaction among the trainees being vocationally reeducated under the Smith-Sears Act?

2. What type of disability do most of them have?

3. Are they a selected group? If so, on what basis?

4. Outline a possible mode of procedure for the vocational committee of five men.

5. Outline an ideal personnel for such a committee?

6. Outline a method of procedure that should have been adopted at the very beginning of the work when it was under the Federal Board of Vocational Education.

7. Estimate the cost of this misguidance at the rate and cost given.

8. Considering the knowledge of trained personnel in the Personnel System of the United States Army that was easily available at the end of the war, why do you suppose that advantage was not taken of it for this work?

9. Why not adopt it now?

10. What principles of guidance have been violated in the procedure of the *Veterans' Bureau? Observed?*

11. *Why is it so difficult to get these trainees to admit that they have* been reeducated?

## CASE PROBLEM

### Causes of Educational Backwardness

Dr. Cyril Burt, the English psychologist, in his book, *The Distribution and Relations of Educational Abilities*, P. S. King & Son, London, 1917, on pages 37–38 presents data from which the following table is adapted:

Table VI.—Causes of Educational Backwardness of Approximately 600 Children in the Special (MD) Schools

| | Per Cent | |
|---|---|---|
| A. Non-mental factors | | 39 |
| Irregular attendance | 11 | |
| Inefficient teaching | 4 | |
| General physical defect | 10 | |
| Special physical defect | 7 | |
| Defect of character | 7 | |
| B. Mental factors | | 61 |
| Weak general ability inborn | 11 | |
| Weak general educational ability result of above | 15 | |
| Specific educational defect | 17 | |
| Defect of character instability | 11 | |
| Irregularity of mental growth | 7 | |
| | 100 | 100 |

### Questions

1. Is the A or B group most influenced by environment? By heredity?

2. Which of the above items could be corrected in school? By what specific means?

3. What are the *apparent* causes of irregular attendance? What are the *real causes?*

4. What are the *apparent* causes of "defect in character?" What are the *real* causes?

5. What can the school system as at present organized do about all the items under B?

6. What might a scientific system of guidance do? Make a list of remedial items.

7. Upon what principles of guidance is this case problem based?

## CASE PROBLEM

### Survey Recommendations for Kansas

"The Report of Survey of State Higher Institution in Kansas," *Bull.*, No. 40, 1923, United States Bureau of Education, G. F. Zook contains among others the following recommendations:

**"That the state law requiring the admission to the freshman class of all graduates from accredited high schools in Kansas be repealed.**

**"That liberal arts and sciences, engineering, fine arts, medicine, pharmacy, agriculture, law, commerce, education, and graduate study be recognized as major lines of work at the university.**

**"That agriculture, engineering, home economics, vocational education, industrial journalism, graduate study, and the biological and physical sciences be recognized as major lines of work at the agriculture college.**

**"That all vocational, industrial engineering, and engineering courses at the normal schools for other than teacher-training purposes be abolished, except temporarily for the rehabilitation of soldiers at Pittsburgh and Hays; and that in the meantime the vocational and regular students be separated rigidly into classes for each group."**

## Questions

1. Why should not all graduates from the accredited high schools be automatically admitted to the freshman classes at the university? On what basis admitted? Excluded? Admitted to some courses excluded from others? How decided? Who should make the decision? What name might you give to this process?

2. Which of the courses designated as "major lines of work" are specialized? Not specialized? Partly specialized? Which are definitely vocational? Not vocational? Which have definite vocational objectives? What proportion of time in the vocational courses are given to vocational subjects? Cultural subjects?

3. Do all of the courses retained as major courses at the agricultural college logically belong there? Why abolish the designated course from normal schools? Why should students in vocational and regular classes be rigidly separated?

4. Upon what principle of vocational *education* are the above decisions based?

5. What principles of vocational *guidance* is involved?

6. What is indicated for the high schools and freshman classes in the colleges if these recommendations are put into effect?

## CHAPTER V

## THE SIX KINDS OF GUIDANCE NOW BEING USED

The attempt to satisfy the needs of individuals for guidance, and the demand of society for efficient service by individuals, coupled with the demands of scientific management in industry and in business to get the one best person on any job, have resulted in the development of six kinds or systems of guidance. These six kinds of guidance may be looked upon as separate units, each complete in itself, or some of them may be given various values and still be related and made into one system of guidance, or, better yet, the six types, with the exception of character analysis, unified into one complete harmonious whole.

**1. Diagnostic and Directive.**[1]—The type of guidance which is attracting most attention at the present time is that in which an individual is looked upon as a "case" for analysis, examination, evaluation, and final diagnosis, with advice given which amounts to nearly the same thing as a doctor's prescription, with, of course, the same reservation that, just as one does not need to follow the doctor's advice, or have his prescription filled, neither need the individual follow the vocational counselor's advice if he is not convinced of its value.

This form of guidance is scientific and, so far as the instruments, methods, technique, and means available are used, it is as exact as diagnoses and prescriptions in the fields of medicine, law, theology or agriculture. It is a part of the movement toward the development of education from a philosophy into a science. It is following along with the new science of psychology, and is making use of all the recent discoveries in the field of psychology. It is taking advantage of research work in surveys, in the development of tests, scales, and measures, and particularly is it taking advantage of the technique that is being developed in all of the above fields.

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[1] See SNEDDEN, D., *Educational Sociology*, The Century Company, New York, 1922, chap. xlvi.

There are six units in a complete guidance system organized on the above basis:

(*a*) *A survey* of students, of educational opportunities, of occupational opportunities, of social needs.

(*b*) *The scientific analysis* of the individual's qualifications and characteristics, the limitations of the requirements of the job, its advantages and disadvantages, its suitability.

(*c*) *The making of an advised choice*, on the basis of the analyses made by the adviser, a study of the parents with some consideration of their wishes, and an analysis of the student.

(*d*) *Education and training*, which sometimes consists of further academic education, prevocational education, the pursuance of tryout courses, and vocational education.

(*e*) *Placement*, which sometimes consists of self-placement, sometimes of assisted placement.

(*f*) *Supervised progress* on the job up to a minimum of 18 years of age, under control of public school authorities. This progress may be in terms of short-term units, juvenile jobs, vacation employment, or long-term units, such as apprenticeship the entire process resulting in placement and replacement, adjustment and readjustment, until we are assured of the progress of the individual to the utmost of his capacities.[2]

**2. Self-guidance.** The second type of guidance being advocated by certain groups and individuals and being practiced in certain school systems is that of self-guidance by means of occupational information. This system consists, primarily, in exposing the individual to a large amount of occupational information, with the belief that some one of these occupations will stand out as being eminently desirable to that individual. One worker in this field says: "Our chief business in guidance is to give to the individual a bird's-eye view of the world's work, the world's needs, and the world's opportunities." It seems to the writer that this is pure idealism, consisting largely of unformed aspirations that can never be realized.

**3. Self-discovery.**—Along with the development of the junior high school movement, we heard a great deal about that function of the junior high school which is denominated as self-discovery, try-outs, and diversified experiences for the purpose of wider contacts with the business of the world, with the ultimate purpose of making wiser vocational choices.

[2] See Chart 16, chap. ix.

## TRY-OUT COURSES

This has resulted in the establishment of various so-called try-out courses in junior high schools. These courses are organized in four ways, each with its own particular name, as follows:

(*a*) *The Russell-Bonser Plan* (Dean Russell and Dr. Bonser, Teachers College, New York City).—In this plan there is one general shop with one teacher, and in this shop is equipment for performing operations and carrying on projects in various vocations, such as printing, wood working, concrete work, mechanical drawing, electrical work, metal working, etc. The boys are to go into these shops and make—within limits—whatever they want to, and participate in those activities which appear to them to be most attractive.

(*b*) *The Ettinger Plan* (Former Superintendent Ettinger of New York City).—In this plan the shops are separated and in charge of a special teacher. The students are routed through four or more of these shops each year for two years, and then in the third year of the junior high school are supposed to specialize for the entire year in the shop which they like the best.

(*c*) *The Gary Plan* (Gary, Indiana).—Under the Gary plan of prevocational work or try-out courses a mechanic is hired as a teacher. He is given an order for some equipment or some repair work about the school. He starts the work, and then at the various class periods the pupils come in to work with him and are assigned by him to various tasks.

(*d*) *The Pittsburgh Combination Plan.*—This type of try-out course is a combination of the Russell-Bonser plan and of the Ettinger plan. During the first of the three junior high school years, the pupils are assigned to a general industrial shop organized on the basis of the Russell-Bonser plan. The second year they are routed through three or more of the prevocational special shops organized on the Ettinger plan, and in the third year they are to choose and specialize in one of those shops.

There is no question about the desirability of these try-out courses from a pedagogical and an educational point of view. But when the advocates of this type of work claim emphatic vocational guidance value for them, we are led to ask several questions. Some of these are: For what do they try out? With the 17,000 occupations listed in the Census, 200 of which are now being taught in the public schools of New York City, only 12 are found as try-out courses in the junior high schools, it seems to be a logical question as to whether or not these try-out courses are not more negative than positive.

Again, why should we not have try-out courses in commercial education, in household arts education, in fine arts education, in musical education, as well as in industrial education? Should not the junior high school multiply its try-out values by organizing try-out courses in all its departments? Why could we not have try-out courses in foreign languages, in mathematics, in English, in history, etc. to ascertain, or try out, the individual's capacities, and to discover his fitness for college entrance, and for specified courses in college, such as law, engineering, medicine, dentistry, etc.?

This topic—the values of try-out courses—illustrates well the paramount weakness of the whole vocational guidance, vocational education, and prevocational education movements. As yet no method has been developed of measuring the degree of functioning of these courses. No one as yet has ever attempted to find out whether these try-out courses really do try out, or just exactly what they try out for. It is not known whether the method of teaching now used develops in the best way whatever try-out values there may be. We do not know which of the four types of organizations has the most try-out value. It is true, however, that many people have dogmatic opinions favoring one or the other, and it is equally true that those opinions are based on nothing more than personal prejudices and empirical judgments.

**4. Self-analysis.**—Dr. Frank Parsons, the father of the modern vocational guidance movement in this country,[3] developed this self-analysis plan, which consists largely of the individual making an analysis of himself by filling in answers to a questionnaire. He then takes this blank to the counselor, after he has analyzed himself by means of the blank, and the counselor gives him much encouragement with a little specific advice. The Y. M. C. A. adopted this plan and have used it quite extensively, although at the present time there is some evidence of its being abandoned.

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[3] PARSONS, FRANK, *Choosing a Vocation*, Part I, Houghton Mifflin Company, New York, 1909, pp. 26–44. See ROBINSON, C. C., *The Find Yourself Idea*, Association Press, New York, 1922. HYDE, WM., *Self-measurement*, B. W. Huebsch, Inc., New York, 1908.

These methods are now gradually being discarded as being *entirely too subjective. In place of this self-analysis we have the development of a method of analysis of an individual by more objective tests, measures, and scales.*

**5. Character Analysis.**[4]—The insistent demand of the individual and of society for guidance and advice in regard to life careers has brought about a renaissance of the old discarded and thoroughly discredited method of analyzing character, and outlining an individual's future, by means of phrenology, physiognomy, palmistry, and handwriting. This is wholly unscientific and without the slightest basis in scientific data or scientific methods, and yet, strange to say, we find many apparently intelligent people believing in the preposterous claims of the practitioners in this field. Still stranger is it that we find educators, school teachers, etc., taking courses in character analysis so that they may be better able to understand, diagnose, and advise their pupils. It goes without saying that this is positively dangerous and should be discountenanced in every possible way.

**6. Inspirational Guidance.**[5]—There are many good-hearted people who are enthusiastic in their endeavors to do something for the unfortunate. They feel the great need for guidance among young people and, being untrained in scientific technique and methods, they quite naturally fall back upon the only method which they can use, namely, the method of inspiration. They feel that what is most needed is to inspire these young people to aspire, neglecting entirely any analytical study of the abilities and capacities of the young, and disregarding the fact that most of these young people would be unable to realize any of their vague unformed aspirations to do or be something big and wonderful. They also fail to realize the importance of the doctrine of individual differences, that people vary widely in many different ways. It is true that we all need inspiration occasionally and often it is the one thing needful to push us over a difficult place, but it cannot in any way be depended upon as a method of guiding young people individually or in groups into the place in life where they can find the greatest possible happiness and opportunity for service. We must find and use a method that is not quite so entirely based upon sentiment, emotion, opportunistic inspiration, and vague aspirations.

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[4] See chap. ii for fuller discussion.

[5] WILLIAMS, SHERMAN, *Some Successful Americans*, Ginn and Company, Boston, Mass., 1904. TAPPAN, EVA M., *Heroes of Progress*, Houghton Mifflin Company, Boston, Mass., 1921. DARROW, FLLOYD L., *The Boy's Own Book of Great Inventions*, The Macmillan Company, New York, 1918. BOND, A. R., *The American Boy's Engineering Book*, J. B. Lippincott Company, Philadelphia, Pa., 1918. *A Living without a Boss*, Harper & Brothers, New York, 1911. PARTON, JAMES, *Captains of Industry*, Houghton Mifflin Company, Boston, Mass., 1919. JACKSON, W. M., *Making Business Advancement Sure*, Frederick A. Stokes Company, New York, 1924. SCHWAB, C. M., *Succeeding with What You Have*, The Century Company, New York, 1918. FLETCHER, W. L., *How to Get the Job You Want*, Houghton Mifflin Company, New York, 1922. DOUGHTON, L., *Preparing for the World's Work*, Charles Scribner's Sons, New York, 1922. ROLLINS, F. W., *What Can a Young Man Do?*, Little, Brown & Company, Boston, Mass., 1907. ROSENGARTEN, W., *Choosing Your Life Work*, McGraw-Hill Book Co., New York, 1924.

We must keep step with and take advantage of all the scientific tests, technique, methods, scales, measures, and procedures that are being developed at the present time.

## CASE PROBLEM

### Effort

The following poem by E. A. Guest has been given considerable publicity. It was found in the office of a vocational guidance adviser, who stated that it typified the most important principle in guidance.

### Effort

He brought me his report card from the teacher and he said
He wasn't very proud of it, and sadly bowed his head.
He was excellent in reading, but arithmetic was fair,
And I noticed there were several "unsatisfactorys" there.
But one little bit of credit that was given brought me joy—
He was "excellent" in *effort* and I fairly hugged the boy.

"O, it doesn't make much difference, what is written on your card,"
I told the little fellow, "if you're only trying hard."
The "very goods" and "excellents" are fine, I must agree,
But the effort you are making means a whole lot more to me.
And the thing that's most important when this card is put aside,
Is to know in spite of failure that to do your best you've tried.

"Just keep excellent in effort, all the rest will come to you,
There isn't any problem but some day you'll learn to do;
And at last when you grow older you will come to understand
That by hard and patient toiling, men have risen to command.
And some day you will discover when a greater goal's at stake.
That better far than brilliance is the effort you will make."

### Questions

1. What phase in the development of the guidance movement does this poem represent?

2. Is it true that "it doesn't make much difference, what is written on the card" . . . "if you're only trying hard?" To the individual? To the teacher? To the future employer? To the school system? To society? To the possible level attained by the individual? To the parent?

3. Is it true that "Just keep excellent in effort, all the rest will come to you?" Anything else needful? What?

4. Is it true that "There isn't any problem but some day you'll learn to do?"

5. Is it true "That by hard and patient toiling men have risen to command?" What else did they have? Has this boy got it? How can you find out?

6. What should this parent have done instead of, or in addition to, what he did do?

7. What might a guidance adviser do in such a situation, to conserve the valuable effort and still improve the situation?

8. What are the possible maladjustments in this case?

## CASE PROBLEM

### Life

The following poem by Nan Terrell Reed was given considerable prominence in the Aug. 15, 1923, issue of the *New York Times:*

### Life

They told me that Life could be just what I made it—
Life could be fashioned and worn like a gown;
I, the Designer; mine the decision
Whether to wear it with bonnet or crown.

And so I selected the prettiest pattern—
Life should be made of the rosiest hue—
Something unique, and a bit out of fashion,
One that perhaps would be chosen by few.

But other folks came and they leaned o'er my shoulder;
Somebody questioned the ultimate cost;
Somebody tangled the thread I was using;
One day I found that my scissors were lost.

And Somebody claimed the material faded;
Somebody said I'd be tired e'er 'twas worn;
Somebody's fingers, too pointed and spiteful,
Snatched at the cloth, and I saw it was torn.

Oh! Somebody tried to do all of the sewing;
Wanting always to advise or condone
Here is my Life, the product of many;
Where is that gown I could fashion—alone.

### Questions

1. What opposing fundamental philosophies underlying present guidance practices are presented here?

2. Give names of persons, books, or methods which advocate, present, or practice these opposing philosophies underlying guidance.

3. Apply the "survival of the fittest" and the "elimination of the unfit" to the above.

4. What are the ultimate objectives of life and living?

5. Just how much individual freedom should or can be allowed? How much should society dominate the individual? Certain case groups of individuals?

## CASE PROBLEM

### THE TEN COMMANDMENTS OF SUCCESS

The following has been given considerable publicity by newspapers, magazines, and particularly the Y. M. C. A., also in lectures on guidance:

### THE TEN COMMANDMENTS OF SUCCESS

By Charles M. Schwab

1. Work Hard. Hard work is the best investment a man can make.
2. Study Hard. Knowledge enables a man to work more intelligently and effectively.
3. Have Initiative. Ruts often deepen into graves.
4. Love Your Work. Then you will find pleasure in mastering it.
5. Be Exact. Slipshod methods bring slipshod results.
6. Have the Spirit of Conquest. Thus you can successfully battle and overcome difficulties.
7. Cultivate Personality. Personality is to a man what perfume is to the flower.
8. Help and Share with Others. The real test of business greatness lies in giving opportunity to others.
9. Be Democratic. Unless you feel right towards your fellowmen you can never be a successful leader of men.
10. In All Things Do Your Best. The man who has done his best has done everything. The man who has done less than his best has done nothing.

### Questions

1. Is the first statement literally true? Always true? What qualifications would you add?

2. What are the essential factors if one is to study hard?

3. Which group of persons generally have initiative? Which do not? Is it a matter of personal choice? Personal development?

4. Do you love your present work? Have you loved all your past work? Differentiate work, play, labor, drudgery, recreation, amusement. Can one will to love his work? What factors are necessary if one is truly to love his work?

5. Should one always be exact? In all things? Some times in some things? What important factors are involved in this question?

6. *What important elements are necessary if one is to have the "Spirit of Conquest?" What would happen if all persons had it? Which persons will inevitably have it? Which persons will inevitably not have it? Have you got it? All the time in all things? Some of the time in some things?*

7. Define personality. What are the elements of personality? Which is most important? At all times? At some times?

8. If you have done your best, should you be rewarded equally with another who has done better? What universal law is involved here? Is the last item literally true?

9. Which type of guidance does this material represent?

10. Would you make use of such statements? Where? Why? What results would you expect?

## CHAPTER VI

## THE PUBLIC SCHOOL SYSTEM AS A SELECTIVE AGENCY FUNCTIONING AS GUIDANCE

There has been, of course, much discussion and consideration of the public school system as a device for the educating of large groups of human beings, but there has been comparatively little consideration or discussion of the public school system as a device for selecting and conserving or selecting and rejecting certain types of students, or students with or without certain capacities, traits, qualities, and aptitudes.

The time has arrived when we must pay an increasingly large measure of attention to the public school as a device which automatically functions in the selection and segregation of specified groups from the great mass of students as they enter and make progress in these schools The writer believes also that attention must be given to other quasi-educational organizations such as the Boy Scouts with their well organized series of tests and tasks; the Y. M. C. A. with its loosely organized series of social attitudes and reactions, and other similar social institutions and organizations.

Chart 5 presents in diagram form some of the factors in our public school system which function in this selective process:

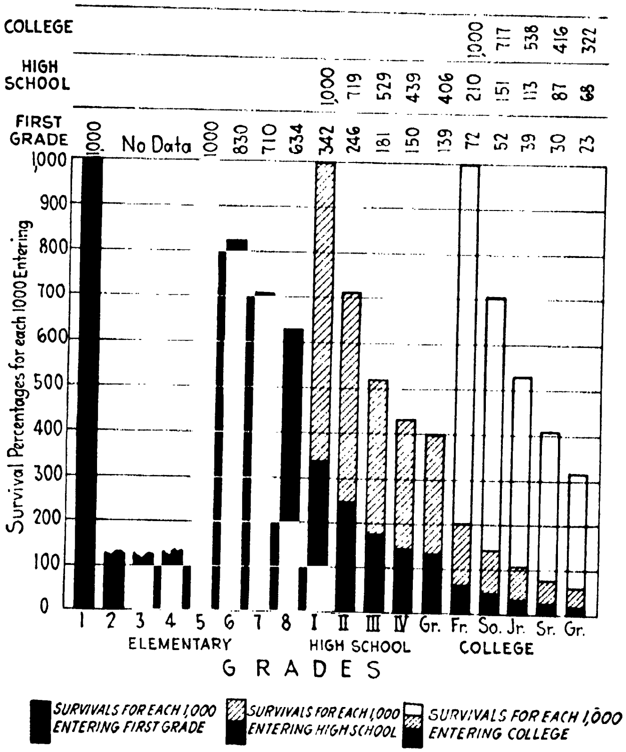
Under *A* are listed the schools units found in the entire public school system, ranging from the kindergarten to the graduate school. This is divided into six distinct levels: (1) the kindergarten, (2) the elementary grades, (3) the junior high schools, (4) the senior high schools, (5) the colleges, and (6) the graduate schools. Opposite each of these six school units we have the approximate factors which tend to select and conserve, or to select and reject, students on the basis of the possession or non-possession or degree of effectiveness of certain capacities and abilities.

Chart 5.—The Curriculum as a Selective Agency Functioning as Guidance

| *A*<br>School units | *B*<br>Subjects, standards, requirements | *C*<br>Individual mental factors | *D*<br>Factors of environment and heredity |
|---|---|---|---|
| I. Kindergartens | Age.<br>Cleanliness.<br>Discrimination of form, sound, color.<br>Social activities.<br>Cooperation. | High I.Q. not important.<br>Stability of behavior.<br>Docility.<br>Imagination.<br>Observation. | Live nearby.<br>Over-crowding.<br>Climate.<br>Attitude of parents. |
| II. Grades 1 to 6 | Vaccination.<br>Oral reading.<br>Phonetics.<br>Mechanical number operations.<br>Arithmetic—45 combinations.<br>Technical grammar. | Low I.Q. eliminated.<br>Abnormal behavior cases eliminated.<br>Memory.<br>Attention.<br>Obedience.<br>Control. | Very few because of the compulsory feature.<br>Physical vitality.<br>Migratory habits of family. |
| III. Junior High Schools | Silent reading.<br>Composition.<br>Mathematical reasoning.<br>Logical thinking<br>Intensification of mental processes. | I.Q. below 80 begin to be eliminated.<br>Special aptitudes.<br>Life-career motive.<br>Instability or abnormal behavior of any kind. | Economic status of family.<br>Community attitudes towards try-out courses, extra-curricular activities. |
| IV. Senior High Schools<br>Selection on the basis of special-type high school and special curricular offerings. | Much depends on diversification and flexibility of courses.<br>Standards set by local or state boards of education or college entrance board.<br>Foreign languages.<br>Science.<br>Mathematics.<br>English.<br>Social attitudes. | I.Q. below 100 eliminated.<br>Ability to form judgments.<br>Stable behavior.<br>Literary-minded.<br>Mathematical-minded. | Physical vigor.<br>Appearance.<br>Race.<br>Traditions of the community in regard to high schools.<br>Local labor conditions.<br>Location of schools.<br>Transportation.<br>Tuition and expenses. |
| V. Colleges<br>Selection on the basis of special-type colleges, special curricula offerings, and varying entrance requirements.<br>Geographical, racial, social, intelligence and scholarship quotas.<br>Character certificate.<br>Religious requirements.<br>Scholarships and endowments. | Foreign languages.<br>Mathematics.<br>English.<br>Science.<br>Choice of "snap" courses and "easy" professors. | High I.Q. 100+.<br>Habits of study without supervision.<br>Industry.<br>Self-control.<br>Religion. | Economic status.<br>Family traditions.<br>Location of school.<br>Religion. |
| VI. Graduate Schools<br>Selection on the basis of previous success and training.<br>Selection on the basis of special types and special offerings. | Mental tests.<br>Scholarship tests.<br>Foreign languages.<br>Science.<br>Mathematics.<br>Capacity for research, original thinking, and initiative.<br>Scholarship tradition. | High I.Q. 110−.<br>Analytical perception.<br>Synthethes.<br>Special interests and aptitudes carry over completely into definite service and contribution. | Economic status.<br>Location of school. |

The thoroughgoing effectiveness of this function of selection and elimination is shown by the following chart (compiled by Dr. S. R. Powers).

CHART 6.—NUMBER OF PUPILS SURVIVING TO EACH GRADE OF THE ELEMENTARY SCHOOL, HIGH SCHOOL, AND COLLEGE FOR EACH 1,000 THAT BEGIN



There is no question but that in the past the public school system has functioned as a selective device which worked very effectively, although largely unconsciously.[1] The type of person for which the public school system was designed was the literary and verbal-minded individual, with a high level of intelligence, whose economic and social status was high. In the earlier years of our school system these individuals were directly headed for the vocational objective of entrance to the ministry. Later, the objectives of entrance to the professions of law and medicine were added, still later, entrance to the professions of teaching and engineering. This process of accretion has continued until at the present time we have the rich and diversified offerings of the modern state university as exemplified in its schools of theology, law, medicine, pharmacy, dentistry, architecture, civil, mechanical, electrical, chemical, structural, and industrial engineering, mining and ceramic engineering, the specialized professions to be found in the general field of agriculture, and the specialized branches in the wide field of education. More courses are being added with each new issue of the university catalogues.

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[1] See COUNTS, G. S., "The Selective Character of American Secondary Education," *Supplementary Educational Monograph*, No. 19, May, 1922.

This increasing richness and diversification of the offerings of the university are extending downward to the senior and junior high school. Whereas in the past, and in the majority of high schools at present, the offering has been and now is a single curriculum with the objective of entrance to the university, we now have, in a slowly but steadily increasing number of senior high schools, diversified curricula, such as college-preparatory, scientific, classical, the English course, the industrial arts course, the household arts course, the normal course, the commercial course, only some of which may prepare specifically for entrance to college. At the present time this tendency toward diversification in the high schools has reached the stage where we now have special-type high schools, such as commercial high, technical high, vocational high, manual high, English high, etc., although it is a question as to how many of these schools hold true to their names.

The same situation holds good in regard to the approximately 800 junior high schools in this country today. These junior high schools are presumably definitely organized on the basis of diversified offerings to meet the demands of individual differences and needs and the varying demands of our social order. The usual organization of the junior high school is on the basis of differentiated curricula, such as academic, commercial, household arts, industrial arts, etc. The larger, more modern junior high schools have other offerings, such as the fine arts course, the music course, and the agricultural arts course.

Wherever it does not seem feasible to organize a separate junior high school, we now have the departmental system in the sixth, seventh, and eighth grades of the elementary school, each subject being taught by a specially trained teacher who teaches one or two subjects as a specialty.

All of this system functions as education, but to exactly what degree, or just how purposive it is, or how much of it is actually used by various individuals in later carrying their own economic load, and how much of it functions in satisfying the needs of society, is a question concerning which there is little common agreement. But to any student of educational and vocational guidance there can be no doubt in regard to the large measure in which our public school system, as organized in the past and as organized at present, has and does function as a selective agency of the highest degree of effectiveness, with all of this selection functioning as guidance by selection and rejection.

Under *B* of the chart, "Subjects, Standards, and Requirements," we must first of all recognize that ability in English, and in reading, writing, and spelling functions as a selective device in the first three grades. In these same grades personal control, sociability, and general behavior also function as selective devices.

In grades 4, 5, and 6, the outstanding subject functioning as a selective device is arithmetic, with grammar a close second. Only those who have the capacity to master formalized work in English, handwriting, reading, spelling, arithmetic, and formal grammar to the satisfaction of the school authorities, and at the same time have the personal characteristics which enable them to work in close contact with large groups of like individuals, can ever hope to make progress through our elementary school system up to the sixth grade.

In the three years of the junior high school there is a selection on the basis of ability to perform certain other forms and kinds of school work. Those children who cannot do the language work or the mathematical work soon find themselves in the household arts course or in the industrial arts course. They are not encouraged to consider going on to college. Conversely, those students who have abilities along the verbal subjects or the mathematical subjects are encouraged to enter the science or academic courses. Students who must leave school quite soon find themselves either in the commercial course, the household arts course, or the industrial arts course.

In the senior high school, with the highly selected group which comprises the student body, we find more selection. The boy who has capacity for mathematics is urged to take the scientific course, with the objective of entrance to a college of engineering. A girl with the same capacity is encouraged to become a teacher of mathematics. The girls who must leave school quite soon takes a nursing or a commercial course; the girl who can remain to graduate, but who cannot go to college, is urged to consider the normal course. The girl who belongs to the upper social and economic levels takes the English, academic, classical, or college-preparatory course with the objective of going to some woman's college or to some one of the numerous finishing schools. Conversely, those students who do not have the special capacities required for these courses are automatically eliminated from them.

We have the same problem in the college or the university. In the college which is organized strictly as a college, that is, with one curriculum, that of the liberal arts and sciences, with perhaps some specialized work in business or engineering in the last one or two years, there is no choice or selection until those last years are reached. In the larger universities, however, such as our great western universities, the selection is made much earlier. In many cases the student must enter a specified four-year course on entrance to college, although at present there is a decided tendency toward establishing a common freshman year, to enable the student to orient himself to the possibilities of the university during the freshman year.

The student who goes to the university and is misguided, or chooses wrongly, soon finds himself in difficulties. It is to be much regretted that, as at present organized, this maladjustment, in a large number of cases, results in the student's leaving the university. In a small proportion of the cases the student changes his course without advice or guidance—except a formal notice that he is likely to fail—and tries again along a different line. It is well-known that, to be successful in the engineering course, a student must be a so-called "shark" at mathematics. The artistically inclined student is automatically eliminated from the engineering school and, we hope, goes into the school of fine arts or of architecture. The clever young man enters the school of law, the more practically minded the school of business, and so on through the list of diversified offerings of the universities. In most of these universities it is possible to state the approximate levels of intelligence necessary to maintain oneself in the various colleges and courses.

All of this is guidance—some of it positive and some of it negative. It is largely quite unconscious and is a result of our public school system functioning as a selective device, whereby it selects from the heterogeneous school population those who can make the best success in the subjects offered and can best meet its standards and requirements, and then eliminates the rest. This, of course, is as it should be, except that no provision is made for those who are eliminated.

Under *C*, "Individual Mental Factors," in the chart, we must consider the intelligence quotient, the mental characteristics of the adolescent; the possession or non-possession of certain aptitudes, capacities, characteristics, and abilities; the development and stability of interests, the effect of the life-career motive; and any psychopathic or psychiatric conditions which may or may not exist in the individual.

The anti-social child has a difficult time in the kindergarten, and the parents quite soon arrive at the conclusion that the kindergarten is not much good and keep their child out of school until the time comes for entrance to the first grade.

As a general thing, a child may drift along through the first, second, and even the third grades without any great difficulty regarding his intelligence or special aptitudes or disabilities, but beginning with the fourth grade retardation begins to take effect. The child who lacks the intelligence to do the work or any special capacities required, or who possesses any disabilities, is thereby automatically selected out and retarded, and, when that retardation becomes so great as to be noticeable, the individual is marked for special examination, treatment, and possible assignment to special classes, such as subnormal classes, coaching classes, opportunity classes. In other words, the child who does not meet the formal requirements of the school system is sifted out and placed in some separate and special group.

In the junior high school the intelligence level functions more and more effectively as a selective device. Many children who leave school with the excuses that they "do not like the school," "can see no use in going to school," "dislike the teacher," "want to go to work," "the family needs the money," etc. do not possess sufficient intelligence to do the work of the school successfully or to find pleasure in meeting the requirements or standards of the school. The elimination of these students from school makes those who remain a more highly selected group.

The junior high school has been organized as a new school unit for the purpose of satisfying the individual differences and the special characteristics of adolescent youth. The exact degree in which the junior high school has functioned in this respect, as measured by its holding power, is not yet answered with certainty. There is no question, however, but that the junior high school does now and will more in the future function in the conservation of the special aptitudes of the individual students, their interests, and particularly in the development of the life-career motive of the students.

The intelligence level becomes of increasing importance as a selective factor as we go on up into the high school, the college, and the graduate school. In the graduate school the ability to do research work of an exacting type acts as a selective factor along with the high level of intelligence.

Under *D*, "Factors of Environment and Heredity," of the chart, we have, first of all, in the kindergarten the selective factor of geographical location and climate. It is possible for only a small percentage of the kindergarten population of the United States to ever attend a kindergarten class. Kindergartens are found in a comparatively small portion of our public school systems and only in the up-to-date, well-to-do, intelligent communities. They are not found in the small rural communities, nor in the small country towns, nor in the lower and poorer districts of our large towns, so that the fortuitous circumstance of place of birth and residence becomes an important factor in determining whether or not a child attends kindergarten. We have many instances where the opening or paving of a road or the establishment of a bus system or trolley line has made a high school education possible to many students.

As we go up through the grades, the junior high school, and the senior high school, we encounter selective factors of race, creed, and color. In some parts of the country students are selected on the basis of color, and in all parts of our country religious creed is a powerful selective device, determining whether or not the individual shall go to a public school, a parochial school, or a strictly private school. Nationality functions as a selective device in deciding whether an individual is more or less consciously guided into certain courses of studies leading into certain occupations.

We are all acquainted with the right or wrong, but, nevertheless, common practice of thinking that Jewish students should, of course, enter the commercial courses or business schools; that the children of southern European extraction should go into the lower types of trades; that an Irishman will naturally be either a politician, a saloon keeper, or a policeman; that an Englishman will, of course, become a first-class mechanic—these superstitions and fallacies quite commonly prevail and are practiced in our educational system.

# CHAPTER VII

## FACTORS WHICH TEND TO PREDETERMINE A PERSON'S CAREER

At this point it may be well to devote a little time to a general consideration of the particular factors which may be considered as predetermining, in more or less measure, a person's career. These factors may be classified under three main headings with 20 items, as follows:

I. **The Factors of Heredity—the Field of Eugenics:**
   1. The level of general intelligence.
   2. Special intelligences.
   3. Abnormal mental condition.
   4. Physical factors, such as size, proportion, strength, activity, condition of vital organs, general make-up and appearance.
   5. Race.
   6. General health and physical condition, susceptibility to disease.
   7. Sex.

II. **Factors of Environment—the Field of Euthenics:**
   8. Geographical location as regards the world, the nation, the town, or a particular location within the town, schools, transportation, etc.
   9. Economic status—the relation of the individual to the starvation line, to the standard of living, financial resources.
   10. The social status of the individual's family, which really is a combination of other factors.
   11. The religious belief of the individual's family.
   12. The political affiliation of the individual's family.

III. **Acquired Factors—the Field of Education:**
   13. General education—not only the grade attained, but also the relation of age to grade attained, education in school, and education obtained outside of school.
   14. Specific skills acquired, particularly those of marketable value.
   15. Specific knowledges acquired, particularly those of marketable value.
   16. Habits established, both advantageous and injurious.
   17. Attitudes developed—conservative, liberal, radical.
   18. Relationships established—clubs, political parties.
   19. Degree of maturity.
   20. Responsibilities in regard to other people—aged parents, younger brothers and sisters, invalids.

It is not possible to assign weights or values to these items for people in general. This can be done only for case groups of people who have been segregated on the basis of certain constants, and for case individuals concerning whom much information has been obtained.

In such a case individual as an idiot, the low level of intelligence is the determining factor. Knowing this, it is possible to guide that individual once for all in a brief time. Whether or not he would go to an institution or be cared for at home depends upon the economic and social status of those responsible for him and upon their personal desires in the matter.

For a college student of high intelligence and training, but who has developed decidedly outspoken radical political attitudes, the radicalism would be a determining factor in our present stage of social and political development.

For a high grade moron who has acquired a specific marketable skill, such as bricklaying, where he would likely be protected and decisions made for him by a union organization, that marketable skill would be the determining factor.

Again, in many cases situations immaturity, maturity, and senility are the determining factors.

In certain occupations sex is the determining factor.

In New York City the fact that a person belongs to the Jewish faith is a strong determining factor. The same may be said for other parts of the country, if a person is of the Roman Catholic faith, colored, or a democrat. If he or she is born a "Piney" in New Jersey, a "Hill-billy" in Kentucky, a "Cabot" in Massachusetts, a "Juke," or a "Kallikak."[1]

No one of these factors in itself is all-determining for all individuals of even the same case group. We must also think of case situations. Being a Jew means much in New York, but little in Minneapolis. The possession of a slight aptitude means much to the low-grade moron, but the same aptitude means little to the college graduate of high intelligence.

The person performing the important function of guidance must, in all cases and situations, survey and analyze all these factors before making decisions or giving advice, except, of course, in obvious cases.

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[1] See DANIELSON, F. H. and DAVENPORT, C. B., *The Hill Folk*, Eugenics Record Office, Cold Spring Harbor, N. Y., 1913. DUGDALE, R. L., *The Jukes*, G. P. Putman's Sons, New York, 1910. GODDARD, H. H., *The Kallikak Family*, The Macmillan Company, New York, 1923.

## THE DETERMINISM OF HEREDITY AND ENVIRONMENT[1]

*There can be no doubt that the main characteristics of every living thing are unalterably fixed by heredity.* Men differ from horses or turnips because of their inheritance. Our family traits were determined by the hereditary constitutions of our ancestors, our inherited personal traits by the hereditary constitutions of our fathers and mothers. By the shuffle and deal of the hereditary factors in the formation of the germ cells and by the chance union of two of these cells in fertilization, our hereditary natures were forever sealed. Our anatomical, physiological, psychological possibilities were predetermined in the germ cells from which we came. All the main characteristics of our personalities were borne with us and cannot be changed except within relatively narrow limits. "The leopard cannot change his spots nor the Ethiopian his skin," and "though thou shouldst bray a fool in a mortar with a pestle yet will not his foolishness depart from him." Race, sex, mental capacity are determined in the germ cells, perhaps in the chromosomes, and all the possibilities of our lives were there fixed, for who by taking thought can add one chromosome, or even one determiner to his organization?

Francis Galton was one of the first who attempted to reduce the mass of conflicting observations on heredity and variation to some system and to establish certain principles as a result of statistical study. He was the real founder of the scientific study of inheritance; he studied characters singly and he introduced quantitative measures. Galton's researches, which were published in several volumes, consisted chiefly in a study of certain families with regard to several selected traits, *viz.*, genius or marked intellectual capacity, artistic faculty, eye color, and disease. As a result of his extensive studies, two main principles appeared to be established:

1. **The law of ancestral inheritance,** which he stated as follows:

The two parents contribute between them on the average one-half of each inherited faculty, each of them contributing one-quarter of it. The four grandparents contribute between them one-quarter, or each of them one-sixteenth; and so on, the sum of the series $\frac{1}{2} + \frac{1}{4} + \frac{1}{8} + \frac{1}{16} \ldots$ being equal to 1, as it should be. It is a property of this infinite series that each term is equal to the sum of all those that follow; thus $\frac{1}{2} = \frac{1}{4} + \frac{1}{8} + \frac{1}{16} + \ldots$, $\frac{1}{4} = \frac{1}{8} + \frac{1}{16} + \ldots$, and so on. The prepotencies of particular ancestors in any given pedigree are eliminated by a law which deals only with average contributions, and the various prepotencies of sex with respect to different qualities are also presumably eliminated.

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[1] CONKLIN, EDWIN G., *Heredity and Environment*, Princeton University Press, Princeton, N. J., 1922, pp. 76–7.

The average contribution of each ancestor was thus stated definitely, the contribution diminishing with the remoteness of the ancestor.[3]

**2. The Determinism of Environment.**—*This determinism of heredity is matched by a corresponding determinism of environment.* Life is possible only within rather narrow limits of physical and chemical conditions and in the main these limits are fixed by the constitution of nature. But apart from these antecedent conditions of life in general there are many minor conditions of environment which exercise a profound influence upon organisms, especially in the course of their development. Very slight changes in food, temperature, moisture, and atmospheric conditions may produce great changes in the developing organism, and these conditions are for the most part entirely beyond the control of the individual affected.[4]

## CASE PROBLEM

### CAPACITIES FOR SUCCESS

In *School and Society*, vol. xvii, No. 431, March 31, 1923, pp. 356-360, President Ricciardi of the California Polytechnic School is quoted as follows:

"A careful study of the lives of successful men discloses that success in any vocation depends fundamentally upon five capacities, namely:

"1. *Mental capacity*, the ability to acquire, coordinate, and apply ideas.

"2. *Physical capacity*, the ability to keep in good health and to endure.

"3. *Moral capacity*, the ability to discharge obligations in accordance with the generally approved ethical standards.

"4. *Cooperation* capacity, the ability to respect the honest conviction of others and to work in harmony with associates and official superiors.

"5. *Craft capacity*, the ability to do the kind of work set as the standard of efficiency for the vocation."

### Questions

1. To which social, economic, and intelligence level does the above apply? Does this constitute a case group? Is it a highly selected group? Which factors function as selection?

2. Would the above form a good basis for the organization of a guidance system in:

    (*a*) A public school system?
    (*b*) A part-time continuation school?
    (*c*) An all-day unit trade school?
    (*d*) A junior high school?
    (*e*) A senior high school?
    (*f*) A technical high school?
    (*g*) A junior college?

3. Which of the above five capacities are measureable? In what degree? By what means?

4. How can a successful man be distinguished? Define success.

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[3] *Ibid.*, p. 321. Also, *Idem*, DUGDALE, R. L., GODDARD, H. H.

[4] *Ibid.*, p. 324.

5. Which of the above five capacities are inherited? Acquired? The result of training? The result of environment?

6. *What principles of guidance are involved in this case problem?*

## CASE PROBLEM

### NATIONALITY AS A FACTOR IN GUIDANCE

On page 67, Summary volume of the Cleveland School Survey, Leonard P. Ayres, Russell Sage Foundation, New York City, 1917, the following table is presented:

TABLE VII

| NATIONALITY | NO. OF STUDENTS IN EAGLE SCHOOL | NO. OF STUDENTS IN TREMONT SCHOOL |
|---|---|---|
| Albanian | 23 | 0 |
| Armenian | 3 | 0 |
| Bohemian | 2 | 10 |
| English | 26 | 276 |
| French | 0 | 1 |
| German | 6 | 202 |
| Greek | 9 | 4 |
| Hebrew | 22 | 1 |
| Hungarian | 14 | 20 |
| Italian | 288 | 22 |
| Lithuanian | 0 | 17 |
| Norse | 3 | 0 |
| Polish | 23 | 483 |
| Roumanian | 3 | 0 |
| Russian | 16 | 443 |
| Ruthenian | 2 | 19 |
| Scotch | 0 | 4 |
| Servian | 0 | 1 |
| Slovak | 116 | 266 |
| Slovenian | 4 | 1 |
| Spanish | 0 | 2 |
| Syrian | 89 | 0 |
| Welsh | 2 | 0 |
| Yiddish | 2 | 4 |

#### Questions

1. Of what value is such a tabulation to the guidance counselor?

2. How would you obtain such a tabulation for the schools in your system?

3. The same report states that Tremont has 24.4 per cent over-ageness and Eagle 29.6. They stand sixty-third and eighty-fourth, respectively, in percentage of over-ageness in a list of 96 schools. (Same reference, p. 93.) Of what value are these facts to the guidance director?

4. With what other facts or conditions do certain nationalities have a high correlation? Which nationalities? With which facts and conditions?

5. Now that these facts are known, what use might be made of them and what might be done about it? In replying guard against sentimentality.

### CASE PROBLEM

### PROBABILITIES FOR INDIVIDUALS WITH VARYING INTELLIGENCE QUOTIENTS

CHART 7

| | | Ages | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 12 | 14 | 16 | 18 | 20 | 22 | 25 | 30 | 35 | 40 |
| Educational Progress | University | | | | | | | | | | |
| | College | | | | | | | | | | |
| | Technical School | | | | | | | | | | |
| | General High School | | | | | | | | | | |
| | Special High School | | | | | | | | | | |
| | Prevocational School | | | | | | | | | | |
| | Grade School | | | | | | | | | | |
| | Vocational School | | | | | | | | | | |
| | Evening School | | | | | | | | | | |
| | Continuation School | | | | | | | | | | |
| | Opportunity School | | | | | | | | | | |
| | Institution | | | | | | | | | | |
| Vocational Progress | Profession | | | | | | | | | | |
| | Semi-profession | | | | | | | | | | |
| | Skilled Occupation | | | | | | | | | | |
| | Specialized Skill Vocation | | | | | | | | | | |
| | Juvenile Occupation | | | | | | | | | | |
| | Automatic Skill Occupation | | | | | | | | | | |
| | Common Labor | | | | | | | | | | |
| | Economic Liability | | | | | | | | | | |
| | | | | | | | | | | | |

**In the above chart, diagram the probable educational and vocational progress of the following type individuals. Choose and specify for each case: (*a*) boys, (*b*) girls.**

1. **Superior minds leaving school at 14, 16, 18, 20, 22, 25.**
2. **Average minds leaving school at 14, 16, 18, 20, 22, 25.**
3. **Dull minds leaving school at 14, 16.**
4. **Defective minds leaving school at 14, 16.**
5. **An epileptic (grand mal), age 12.**
6. **A case of incipient *dementia praecox*, age 10.**
7. **A case, age 12, with one parent feebleminded.**
8. **A dull boy who likes to "make things" and is docile if let alone, age 14.**
9. **A dull girl who likes to "make things" and is docile if let alone, age 14.**
10. **A dull girl with recurrent hysteria, age 14.**

11. An average mind with aptitude for music, age 16.
12. A dull mind with sex perversions, age 12.
13. A below-average person who believes that he or she receives messages from spirits, age 16.
14. A brother (age 12) and sister (age 14) whose parents are both mental defectives.
15. A boy (age 16) who is a pyromaniac.
16. A girl (age 16) who is a chronic "day dreamer" and acts out her dreams.
17. A boy (age 16) who is an habitual truant in an endeavor to "go west and kill Indians."

### Questions

1. Which of the above cases or case groups would need the least guidance?
2. Which would need expert individual diagnosis and constant observation?
3. Which would need no individual diagnosis, interview, information, or advice?
4. Which would benefit most from vocational information? Educational information? Which least?
5. Would you give the same tests to all? Why?
6. Would you give the same vocational information to all? Why?
7. Which could be diagnosed in a few minutes and guided once for all?
8. Which would need recurring analysis and reguidance?
9. Justify your right to make classifications of human beings and to advise or guide them into various life units, levels, and activities.
10. Are you "branding" these people when you make these diagnoses, recognize these conditions, and give advice accordingly?

## CASE PROBLEM

### The Ten Items of the Massachusetts Examination

The *Bulletin*, "The Inauguration of a State-wide Public School Mental Clinic in Massachusetts," by Dr. Walter E. Fernald, published by the National Committee for Mental Hygiene, 370 Seventh Avenue, New York, 1922 (page 3), advances the following ten fields of inquiry as necessary for a thorough understanding of difficult school children.

1. Physical examination: bodily constitution and make-up.
2. Family history: heredity.
3. Personal and developmental history: capacity for family and social adaptation.
4. History of school progress: school record.
5. Examination of school work: pedagogical measurements.
6. Practical knowledge and general information.
7. Economic efficiency.
8. Social history and traits: environment.
9. Moral reactions: psychometric examinations, complexes.
10. Psychological examinations: clerical record.

The examinations are conducted by traveling clinics composed of:

1. A psychiatrist.

2. A psychologist.
3. A social worker.
4. A clerk.

The children examined are selected by the local school authorities. There is no standard method in use for making this selection.

### Questions

1. How can society as represented in this case by the state justify such a proceeding as this state-wide examination?
2. What ground does the psychiatrist cover?
3. What ground does the psychologist cover?
4. With which of the ten items would the work of the psychiatrist and the psychologist be most closely related?
5. Which of the three examiners would deal with aptitudes?
6. Under each item make a list of standards, scales, tests, measures, that are available.
7. Does this constitute guidance? If not, why not? If so, who does it?
8. What principles of scientific guidance are involved?
9. What are the probable methods of selection used by the school authorities in selecting these children (4,500 up to May 1, 1922)? Which are sound? Which unsound? Why? What would you recommend?
10. What other fields of inquiry would you recommend?

## CASE PROBLEM

### Occupation of Fathers of Engineering College Students

The 1923–24 catalog of The Georgia School of Technology (Atlanta) a school of mechanical, electrical, civil, textile and ceramic engineering, engineering chemistry, architecture, commerce, and industrial education, on page 213 gives the following summary:

Table VIII.—Profession or Occupation of Parents of Students in College Day Courses

| | | | |
|---|---|---|---|
| Merchants | 354 | Workmen | 19 |
| Farmers | 205 | Insurance agents | 33 |
| Manufacturers | 127 | Cotton merchants | 32 |
| Salesmen | 77 | Ministers | 27 |
| Railway and telegraph employees | 127 | Automobile dealers | 10 |
| Physicians | 50 | Accountants | 41 |
| State and city officers | 66 | Teachers | 16 |
| Engineers and architects | 31 | Dentists | 10 |
| Bankers | 36 | Newspaper men | 12 |
| Lawyers | 38 | Miscellaneous | 139 |
| Real estate | 44 | Not given | 375 |
| Contractors | 35 | | |
| | | Total | 1,904 |

Two general statements are current at the present time concerning the relation of the vocation of the father and the vocational choice of his children, namely:

1. That the sons tend to choose vocations different from those of their fathers.
2. That the sons tend to choose vocations similar to those of their fathers.

### Questions

1. Which do you accept as nearest the truth?
2. *What basis have you for your belief?*
3. *Is it a sound basis? What data? Based on limited observations in number? Kind?*
4. *Is the whole question one of levels of intelligence rather than specific occupations? If a highly selected group?*
5. In certain groups is the tendency toward choosing higher level vocations, or lower? What groups?
6. Are there many engineers in Georgia? Many farmers? Merchants? (See vol. iv, *Occupation Statistics*, U. S. Census.)
7. What bearing do the comparative numbers of engineers, farmers, and merchants in Georgia have on this problem?
8. What about the 375 "not given?" What proportion were probably laborers, street sweepers, hod-carriers, motormen, bricklayers, plumbers, machinists, draftsmen, semi-professional or professional? Is it probable that many of the fathers were dead or retired?
9. What do you think similar statistics would show in the Manhattan Trade School for Girls, New York City? The St. Paul, Minnesota, Vocational School for Boys? The New Bedford, Massachusetts, Textile School?

## CASE PROBLEM[5]

### Vocational Trends among High School Pupils in Wisconsin

From a "Brief Investigation of Vocational Trends among High School Students in Wisconsin," by H. W. Schmidt, High School Supervisor, Department of Public Instruction, Madison, Wisconsin, in the *Industrial Arts Magazine*, June, 1923, pages 215–222, the following five schools were selected from the returns of 45 schools, because these five maintained four-year manual arts courses.

The statistics are the result of a questionnaire asking students to state their choice of their future vocation.

Chart 8

| Type of city | School number | Population of city | High school enrollment | Special courses offered |
|---|---|---|---|---|
| Industrial.......... | 5 | 9,130 | 385 | Manual Arts, Home Economics, Commercial, Agriculture, Teacher Training |
| Industrial.......... | 20 | 13,610 | 529 | Manual Arts, Home Economics, Commercial, Agriculture, Teacher Training |
| Semi-industrial....... | 23 | 5,104 | 351 | Manual Arts, Home Economics, Commercial, Agriculture, Teacher Training |
| Semi-industrial....... | 45 | 9,290 | 341 | Manual Arts, Home Economics, Commercial, Agriculture, Teacher Training |

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[5] For the presentation of this problem the author has to thank L. E. Lockwood, a student in one of his classes.

CHART 8.—(*Continued*)

CHOICE (PER CENT OF WHOLE)

| School number | Replies used | Agriculture | Professions | Business | Industrial | Nurse | Fine Arts | Miscellaneous | Undecided |
|---|---|---|---|---|---|---|---|---|---|
| 5 | 333 | 3.5 | 32.1 | 23.1 | 8.4 | 3.6 | 3.0 | 5.1 | 21.0 |
| 20 | 447 | 0.6 | 34.3 | 27.7 | 4.6 | 10.0 | 4.2 | 4.7 | 13.4 |
| 23 | 333 | 3.0 | 28.6 | 23.7 | 6.9 | 5.4 | 3.9 | 4.5 | 21.1 |
| 45 | 296 | 4.0 | 35.0 | 35.2 | 6.0 | 4.4 | 3.0 | 6.6 | 4.0 |

PER CENT DISTRIBUTION OF VOCATIONS IN EACH GRADE GROUP, BASED ON THE RETURNS FROM 48 SCHOOLS, 2,962 REPLIES

| Vocations | Grades 9 and 10 | Grades 11 and 12 |
|---|---|---|
| Agriculture | 72.4 | 27.6 |
| Professions | 56.3 | 43.7 |
| Business | 59.1 | 40.9 |
| Industrial | 79.0 | 21.0 |
| Nurse, etc | 62.7 | 39.3 |
| Fine arts | 49.2 | 50.8 |
| Undecided | 69.3 | 30.7 |

## Questions

1. Does the occupational type of community influence the choice of a vocation? For or against? For which students?
2. If only from 4.6 to 8.4 per cent of the students expect to enter industrial pursuits, and of this number only 21 per cent are found in the eleventh and twelfth grades, are the school authorities justified in maintaining four-year manual arts courses? On what basis?
3. How do you account for the decided falling off in the choice of agriculture and industrial vocations in the eleventh and twelfth years?
4. Of what value are such statistics to the guidance worker?
5. In view of the needs of the community, would or should vocational guidance change the above figures to any great extent?
6. Draft a questionnaire that would bring in the data necessary to make such a study.

## CASE PROBLEM[6]

### DISTRIBUTION OF HIGH SCHOOL STUDENTS BY THE OCCUPATIONS OF THEIR FATHERS

In "The Contribution of Intelligence Tests to Educational Guidance in High School," published in the *School Review*, November, 1922, I. N.

[6] For the presentation of this case problem the author has to thank Miss Georgia Brown, a student in one of his classes.

Madsen, of the State Normal School, Lewiston, Idaho, presents the following chart:

CHART 9.—PERCENTAGE DISTRIBUTION OF STUDENTS BY OCCUPATIONAL GROUPS OF FATHERS IN CENTRAL HIGH SCHOOL AND HIGH SCHOOL OF COMMERCE, OMAHA, NEBRASKA

| Class | Unskilled labor | Semi-skilled labor | Skilled labor | Business | Professions |
|---|---|---|---|---|---|
| Freshmen | 8.6 | 9.2 | 28.0 | 42.5 | 11.7 |
| Sophomore | 4.7 | 5.2 | 31.0 | 44.3 | 14.8 |
| Junior | 3.5 | 6.0 | 23.0 | 47.5 | 20.0 |
| Senior | 1.6 | 4.4 | 20.8 | 46.2 | 27.0 |

1. How can you reconcile the above data with the fact that out of 36,500 soldiers in one of the training camps 20 per cent came from the unskilled and semi-skilled group, 61 per cent, from the skilled group, 14 per cent from the clerical and business group, and 4 per cent from the professions, and that for the United States as a whole only about 2 per cent of the population are in the professions?
2. From among these students, 930 were asked to state their vocational ambitions, and 61 per cent wanted to enter the professions. How would you reconcile this ambition with the fact that only 16 per cent of the fathers were in the professions?
3. In which of these groups is the mortality the greatest? The lowest? How would you account for this?
4. Which groups would you expect to have the highest I.Q.?
5. What selective factors function as guidance in this situation?
6. Of what value would such a chart of your students be to you as a guidance worker?
7. Explain in detail exactly how you would secure and arrange such data.
8. Find or draft a definition of unskilled labor, semi-skilled labor, skilled labor, business and profession.

## CASE PROBLEM[7]

### RELATION OF OCCUPATION IN 1921–22 TO PREFERENCE IN 1917–18 IN GROUP OF 272 HIGH SCHOOL PUPILS

In *Psychological Tests and Guidance of High School Pupils*, Proctor, Public School Publishing Company, Bloomington, Illinois, 1922, page 80, the following chart is presented:

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[7] For the presentation of this case problem the author has to thank A. C. Hoyt, a student in one of his classes.

CHART 10.—GENERAL INTELLIGENCE
(Alpha Test)

| | 80–99 | | 100–119 | | 120 or over | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | Boys | Girls | Boys | Girls | Boys | Girls | Boys | Girls | Both |
| Vocation same as preference stated in 1917–18 | 3 | 28 | 14 | 34 | 3 | 5 | 20 | 67 | 87 |
| Different vocation but same rank as original preference | 1 | 7 | 4 | 5 | 1 | 1 | 6 | 13 | 19 |
| Higher rank | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 2 |
| Lower rank | 39 | 31 | 46 | 31 | 15 | 2 | 100 | 64 | 164 |
| Totals | 45 | 66 | 64 | 70 | 19 | 10 | 126 | 146 | 272 |

This table shows that 40 per cent of these former high school pupils are engaged in occupations of the same or higher rank with reference to their original vocational preference. Correspondingly, 60 per cent are in occupations of lower rank than that of the preference expressed in 1917–18.

Among the boys, 9 per cent of those with I.Q.'s below 100, and 30 per cent of those with I.Q.'s above 100 are engaged in occupations equal to or above their preference.

Among the girls, those above average intelligence have been no more successful than those of less than average intelligence in attaining their objectives.

### Questions

1. Do these facts show that intelligence played a greater part with boys than with girls, or was it something else?
2. Account for the fact that more girls than boys were in the vocations of their original choice.
3. As between low and high I.Q. groups, what is the probability as to vocational destination?
4. Does this study serve to strengthen or weaken one's faith in the prognostic value of intelligence tests?
5. Would this study be of any value in determining the vocational content of a high school curriculum?
6. What relation does the above have to the following: Determinism, Freedom of the Will, Conscious Purpose, Inspirational Guidance, Self-analysis, Vocational Information, Diagnostic Guidance?

## CASE PROBLEM[8]

### ROSALIE R

Rosalie R.; orphan; 15 years of age; ward of a Children's Aid Society; born in United States of American-Jewish parentage; good, untainted stock in maternal and paternal branches.

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[8] For the presentation of this case problem the author has to thank Miss Eva R. Goldstein, a student in one of his classes.

*Physical.*—Health very good; no defects nor deformities. Appearance over-developed, awkward, ungainly, homely, over-dressed, cosmetics, perfumes.

*Intelligence.*—Inferior. Stanford-Binet reveals an I.Q. of .74. No special abilities.

*Education.*—Left school at age of 15 in the fifth grade. Scholarship uniformly poor; attendance irregular; conduct poor. Left of own volition; hated school; eager to go to work. No vocational training.

*Character.*—Irresponsible, unstable, disorganized, "boy-crazy." Very susceptible to undesirable influences. Adapts self very well to supervision, but away from it immediately breaks down. All these probably symptomatic of her low intelligence.

Committed to the Children's Aid Society through Juvenile Court on a charge of larceny.

*Vocational History.*—Referred to Vocational Guidance Director by religious society. Wanted to be a saleslady, but not qualified physically and perhaps mentally. Placed in three factories doing routine work. Longest time she held a position was two weeks. Stayed one day as a nurse girl in an "opportunity" home. Stayed one day and one night. Returned to institution where she has been merely lounging around for the past two months. No longer wants to work. Now wants to return to school.

Note: Lived at institution under supervision while working in factory.

### Questions

1. Wherein and why did the first attempts at vocational guidance fail?
2. Which was to blame for this having been the first attempt, and at the age of 15, with a school-retarded girl of low intelligence—school or the society?
3. Which do you think was better qualified and prepared to guide this girl, presuming that the school was doing vocational guidance work?
4. Can this girl be permanently adjusted vocationally once for all time?
5. Should this girl be allowed to return to school?
6. Does the fact that she is "boy-crazy" signify anything as to the period of time for which she will be employed? If so, should this influence your decision and lessen your feeling of responsibility?
7. Are the factors of intelligence, lack of special abilities and of specialized training, educational achievement, and character of equal or unequal importance? Which factor or factors make this a specially difficult case?
8. How will you reconcile the stated interest to be a saleslady with actual capacity and ability? Would you recommend such a girl for a sales position? In considering a sales position for her, what factor or factors would be most important—intelligence, appearance, or irresponsibility? Is this interest merely one of social prestige?
9. How will the fact that she is very susceptible to undesirable influences influence your decision as to the type of work? And that she adapts herself very well to organized and sympathetic supervision?
10. Would it be all right to allow this girl to work out her own salvation vocationally? To throw her on her own resources in job hunting?
11. What have you to suggest for this case?

## INDIVIDUAL CASE PROBLEM[9]

### High School Senior—Frank A.

*Personal Appearance.*—Shorter than average, fairly good looking, neatly and well dressed.

*Economic Status.*—Working his way. Grocery and hotel clerk. Always had a job but changed two or three times during the year.

*Social Status.*—Middle class—there are no class distinctions in the town, which is an agricultural community of about 2,000. He was away from home. His family lived in a neighboring town. His older sister is a teacher.

*Scholarship.*—Uniformly poor, barely "getting by" in everything. Transferred to this school from his home town because he could not get along there and the principal thought if he got away from a particular girl things might be better. He immediately developed a severe "case" on one of the girls in this school.

*Character.*—Unreliable a smooth talker and expert excuse maker. He seemed steadfast and determined in his desire to be a dentist and planned to work his way through dental college. He never seemed to worry about his poor work in school or to realize that it was not up to standard, despite warnings and low grades.

### Questions

1. What other information would you want? How would you get it?
2. Would you recommend him for dental college because of his expressed desire? (Admission to college is granted to high school graduates on principal's recommendation of scholarship and character.)
3. What kind of guidance would you give him? What are the principal factors which led you to this decision?

## INDIVIDUAL CASE PROBLEM[10]

### John D.

*Name*—John D.

*Chronological Age.*—14 years, 2 months (June 18, 1921).

*I.Q.*—132 Terman group test, 130 Terman individual test.

*Parents' Nationality.*—Father, American of Irish decent, mother, French from Canada.

*Father's Occupation.*—Lawyer.

*Social Status.*—Good.

*Economic Status.*—Excellent.

*Number of Children in Family.*—One.

*Health.*—Delicate; subject to nervous headaches; out of school at least three weeks every winter with heavy colds or tonsilitis.

*Physical Equipment.*—Height 5 feet 6 inches; weight 130 pounds. Slight impediment in speech when excited or embarrassed.

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[9] For the presentation of this case the author has to thank Miss Edna R. Bishop, a student in one of his classes.

[10] For the presentation of this case the author has to thank Miss Mary McGair, a student in one of his classes.

*Education.*—Graduated from grammar school at 11 years of age. Entered Classical High School. Failed in freshman algebra, received highest mark in all other subjects. Repeated freshman algebra twice and after failing the third time transferred to Commercial High School. Is now a Junior doing excellent work except in commercial arithmetic and bookkeeping, in neither of which has he covered the freshman work. Both subjects are required for graduation. Is discipline problem in these two classes only, teachers complaining that he will not pay attention.

*Outside Interests.*—Scouting, cross-country running, and violin playing. Mother says he plays for hours to himself in his room for his own amusement. Also plays in high school orchestra. In scouting is a "badge fiend." Scout master finds him capable but not specially good mixer, inclined to be shy.

*Temperament.*—An individual Downey will-temperament test showed him to be high in speed of decision, speed of movement, finality of judgment, coordination of impulses, and flexibility; average in motor impulsion, noncompliance, and motor inhibition; and low in interest in detail, freedom from load, self-confidence, and volitional perseverance. Adolescence as a factor makes the result less reliable than with older or younger cases, but the summary shows him of the hair-trigger type.

*Interview.*—The case came to the adviser's attention the last week of school as a discipline case, the offense being an impertinent retort upon being told that he had failed in his final examination in arithmetic. The boy was sullen and defiant at first, plainly a defensive attitude, but confessed himself completely discouraged. He is afraid of mathematics he says. He explains that he does well on intelligence tests because "that part of it doesn't last long." On investigation it was found he had skipped the fifth grade where fractions are taught and when examined failed in all four processes involving fractions. This summer the boy is being tutored in arithmetic, starting at the beginning. His teacher reports inaccuracy in execution but interest and grasp of principles. Two spells of sullenness and depression in the first week, but none since. Lessons have been cut down from two hours to one. Psychiatrist, friend of the father, recommends lessons be given up, but boy refuses and protests he enjoys them and is getting hold of the work.

### Questions

1. If John fails after his attempt, how would you treat his case as a social problem? As an educational problem?

2. Discuss each of the following attitudes:

(*a*) The boy's: "There must be something the matter with me. I might better be dead. I wish I were."

(*b*) The parents': "His health comes first, but we do want him to go through college."

(*c*) His home-room teacher's: "What he likes he does well, but he won't try when it comes to arithmetic and bookkeeping."

(*d*) The doctor's: "This school business will make a nervous wreck out of him."

3. Make an analysis of this case and draft a prescription schedule.

## INDIVIDUAL CASE PROBLEM[11]

### Bertha B

*Chronological Age.*—18 years 9 months.

*Graduate.*—Mountain Mission School with one year at a normal school.

Member of a family of five. Economic status very poor.

Poor heredity.

Mountain cabin home.

Grade of school work B in music and English, average in other subjects.

Interested in social work, but feels she would not succeed.

Family requires her help.

A wealthy woman has offered to give her a musical education.

### Questions

1. Would you give intelligence tests? Which?
2. Would you give special tests—music? Which?
3. Would you give achievement tests—music? Which?
4. Would you give aptitude tests—music? Which?
5. What weight would you give to the environment as a factor?
6. Make an analysis of this case and draft a tentative prescription schedule.

## INDIVIDUAL CASE PROBLEM[12]

### Gordon B

*Chronological Age.*—14 years 3 months; 5 feet 11½ inches tall.

*I.Q.*—Normal.

*A.Q.*—Retarded 1½ years.

*P.A.*—School physician and nurse report no troubles; looks as well developed as a boy of 18, healthy looking, poor posture.

*Characteristics.*—He is listless, "slumps" continually, indifferent to everything—books, shop work, music, art, athletics, and all—shows no interest in anything; does not read; does not play "group" sports nor "individual" sports.

*Parents.*—Father traveling salesman, mother refined invalid. Both appear normal.

*Brothers.*—One younger, two children in family.

*Home.*—Comfortable and well kept.

### Questions

1. What should be done with Gordon?
2. What advice should vocational adviser offer?
3. Upon what should such advice be based?
4. What is the important factor in this case?
5. What phases of Gordon's life should be investigated?

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[11] For the presentation of this case the author has to thank Miss K. Kearney, a student in one of his classes.

[12] For the presentation of this case the author has to thank A. I. Lukes, a student in his classes.

## INDIVIDUAL CASE PROBLEM

### HIGH SCHOOL—ANDREW M

Andrew M., a husky boy of 17 years, has just completed the first year of a regular academic high school. He has been in attendance 2½ years. He has no grade above bare passing. He plays right half back on the football team and is catcher on the baseball team.

His father is a plumber and is anxious that Andrew complete his high school education and go to Massachusetts Institute of Technology. The father stopped school at the fourth grade. The mother is a pretty woman, fond of clothes, and a movie addict.

Andrew is docile, a good boy and willing to do whatever he can.

### Questions

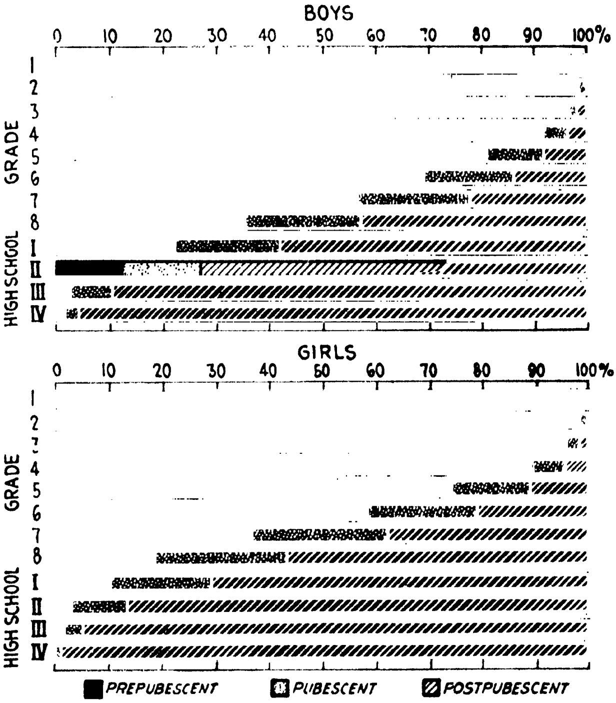
1. How would you proceed to make a diagnosis of Andrew?
2. What measures, rules, standards, and tests would you use?
3. What vocational information would you give?
4. What does his parentage indicate?
5. Would try-out courses help? Has he had any?

## CHAPTER VIII

## SOME CHARACTERISTICS OF THE ADOLESCENT

It is necessary that vocational advisers keep continually in mind that the major portion of their work will be with adolescent youth, ranging approximately from the age of 12 as a minimum to the age of 20 as a maximum. It is now quite well established that boys and girls, while going through this adolescent period, have certain marked characteristics, are subject to

Chart 11.—Percentage of Prepubescent, Pubescent, and Postpubescent Pupils in Various Grades (Boys, Crampton, Girls, Baldwin)



certain kinds of appeals, develop certain attitudes, and are subject to certain modes of action.[1] In general, we find the beginning of adolescence at about 10 to 12 years. Chart 11 compiled by Dr. Powers from data "Boys from Crampton, Girls from Baldwin," shows that the approximate midpoint *(56 per cent) between the prepubescent and the combined pubescent is located in the seventh grade for boys and the sixth grade for girls.*

Boys from the ninth to the twelfth years (approximately third to sixth grade) grow about 5½ inches in height. This growth in height is correlated with spells of moodiness and depression, alternating with periods of happiness, confidence, and gayety. Girls at the same period grow about 7½ inches in height. During this rapid growth there is a desire for motor activity. If the growth is rapid, it is generally accompanied by a loss of motor efficiency. It is a period of habituation, both physical and mental. The individuals begin to develop the power to analyze, to project ends, and to utilize various devices for attaining those ends. There is a *growing interest for mechanical devices, tools, and machines, which very often misleads the vocational adviser into believing that this individual should be a machinist or a mechanical engineer,* when his interest in mechanical devices or machines is merely an incident of his adolescent development.

The pupils become capable of more sustained interest and attention. They have patience for mechanical drill when that drill is motivated, and particularly when it is motivated by the life-career motive. The mental and physical activity in general become much more intense. There is often a quickness of response with lack of control. There is a development of acquisitiveness and inquisitiveness. All their activities seem to tend toward more practical and concrete ends. They are very susceptible to challenges of all sorts. They seek companionship, are generally social, and like to cooperate and to compete. *At this age most boys want to be policemen, locomotive engineers, aviators, electricians, machinists, with an occasional soldier and sailor. The girls want to be nurses, teachers, and secretaries.*

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[1] See HALL, G. STANLEY, *Adolescence*, vols. i and ii, D. Appleton & Company, New York, 1905. HALL, G. STANLEY, *Youth*. KING, *The High School Age*. INGLIS, A., *Principles of Secondary Education*, Houghton Mifflin Company, Boston, Mass., 1918. BIGELOW, M. A., *Adolescence*, The National Health Series, Funk & Wagnalls Company, New York, 1924.

Here we find a development of an appreciation of self as a decided force. Where before they have been accepting authority unquestionably, they now begin to question and often to defy authority not from the point of view of disagreeing with authority but merely as an expression of their own ego.

*During the period of ages 12 to 14—grades 7 to 8—children become introspective, moody, and critical, with a growing feeling* of reverence and a growing interest in religion. They are open to constructive criticism, but resent destructive criticism. They are always willing to listen to advice if it is given to them sympathetically and understandingly. There is a tendency to restrict social life to their own gangs, chums, fraternities, sororities, cliques, and clubs, with a constant danger of the development of snobbishness.[2] They have a strong desire for approbation and dread ridicule. All of this is accompanied by a strong growth of heroic motives.

During the period of 14 to 16 years of age—junior and senior high schools—there is a decided development of hero worship. The youths admire and want to be strong, virile men. They take great pride in their bodies, ancestry, friends, and members of their family who have accomplished something. They are very sensitive concerning their clothes and their opinions. A strong feeling of loyalty and an attitude of chivalry is present and above all we find the development of a life purpose. All of these characteristics should be used by the adviser to obtain desirable reactions and to develop right attitudes and to inhibit undesirable reactions and responses.

The characteristics of young people at this particular time have been shrewdly and entertainingly written by Booth Tarkington in his three books, "Penrod," "Seventeen," and "Ramsey Milholland."

This is a period of profound physical change. Both sexes suddenly begin to grow rapidly. The boys suffer a breakdown of muscular control. They are ungainly, awkward. They do not know what to do with their hands or their feet. For a while the girls forge ahead of the boys. They look like grown-up young ladies, while the boys are still in the uncouth age. During this period we find a maturing of sex, sex organs, sex thoughts, sex reactions. This rapid maturing is often accompanied by low vitality and weakened vital resistance. It seems that about *all these boys and girls want to do is to eat, sleep, read, and loaf. Perhaps further study of this period will show that, within certain limitations, that is about all they should do.* All of this is accompanied by psychical depression, and retarded interest in, and fitness for, severe mental work. *This condition often misleads the vocational adviser into thinking that these individuals are lazy, unwilling to work, and lack the ability to work.* Great care must be taken at this particular time to base judgments upon all of these factors and not upon any particular one.

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[2] See Forbush, W. B., *The Boy Problem*, The Pilgrim Press, Chicago, Ill., 1902. Forbes, E. S., "Working with Boys," *Bull.* , No. 2, Social Service Series, American Unitarian Association, Boston, Mass., p. 2. Buck, W., *Boy's Self-governing Clubs*, The Macmillan Company, New York, 1903.

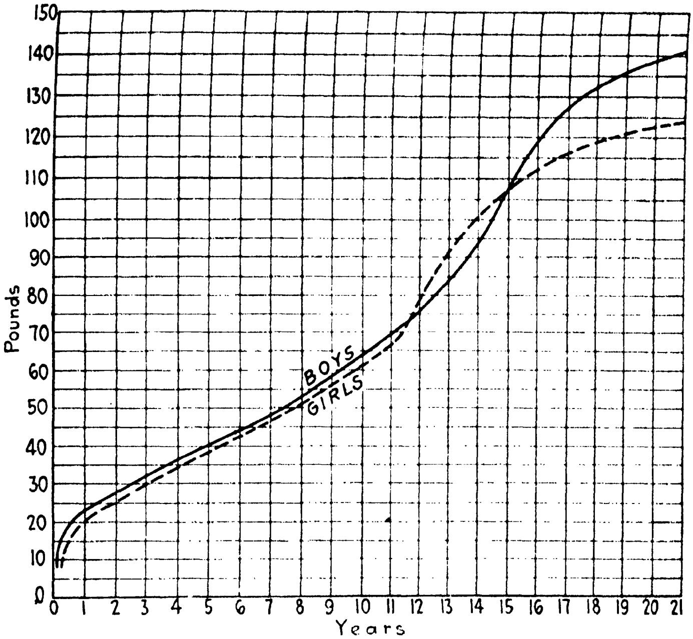
The boys of this age seem to take a peculiar delight in breaking through the restrictions on conduct enforced during childhood. They develop streaks of wildness and rebellion against authority, followed by fits of depression, moodiness, and desire for sympathy. Boys, particularly, find it difficult to conform to the methods, standards, and subjects of the usual high school. This is also a time of the fiercest radicalisms and loyalties, dogged conservatisms, irrepressible gayeties, followed by reactions of depression and bitter melancholy.

The adolescent is essentially a dreamer; spiritual intensity is high. It will never be higher. He has unutterable longings, is a hero worshipper, has high aspirations. He thinks great thoughts, wants to do something big and startling that will attract the attention of the whole world to him.

During the ages 16 and 17—senior high school—physical growth begins to slow down. The girl has usually attained maturity, which the boy does not reach until he is 19. The girl begins to fill out, while the boy tends merely to grow taller. Both develop a finer correlation between the hand and the eye and the ability to perform skilful acts. This is also accompanied by inability to sustain prolonged physical effort.

The following "typical growth chart" shows in a general way the relation of growth in height to age and the variation between the sexes. Care must be taken in interpreting such general charts as these, not to forget that we have individuals and groups of persons who are characteristically short, tall, stout, thin, etc., and we must not class any individual as abnormal because he or she does not conform to these type charts until we have discovered what their characteristics are in this respect.[3]

CHART 12.—TYPICAL GROWTH CHART



The imaginative, day dreaming of earlier years now takes the form of more definite plans for the future. The boy is now more particularly interested in what he is going to do, and what he is going to be, and begins to measure everything by the standard of how much it contributes toward some plan that he has developed. He particularly delights in the tricks of logic, debates, arguments. The sex attraction, sex urge and stress are great. He is fundamentally a self-analyzer, quite generally in a way that decreases his own self-respect. He is subject to religious doubts and is given to spiritual introspection.

In dealing with these boys and girls it must be kept clearly in mind that they are going through a process of "growing up." Adolescence is derived from the Latin word *adolescentia*, which means growing up. The powerful factor that causes so many *"upsets," mental, moral, and physical, is the development that takes place in the shorter period of "pubescence."* The origin of the words "puberty" and "pubescence" is from the Latin *pubertas, pubes,* and *puber,* meaning arriving at the age when the power of procreation or reproduction is developed. This development takes place during the early part of the so-called "adolescent period."

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[3] See TAYLOR, C. K., *Physical Standards for Boys and Girls*, The Academy Press, Cateret Place, Orange, N. J., 1922, pp. 38–52.

The development of the reproductive glands, the spermaries and the ovaries, is not, contrary to current opinion the only chemical-physical factor that is back of the changes during this period. The secretions of the endocrine glands, the thyroid and parathyroid at the neck, the pineal and pituitary glands in the lower portion of the brain, the suprarenals located near the kidneys, in addition to the reproductive glands—all exercise a more or less powerful influence at this time. The over or under activity of any of the glands in sending their secretions (hormones) into the blood and lymph, produce extremely disturbing changes in the mental, moral, social, and physical make-up of the individual, resulting in a condition of unbalance that is often difficult of adjustment.

It is because of all the foregoing factors that the guidance adviser must be a person well controlled, scientifically trained, and of wide sympathies and endless patience.

### THE PROBLEM OF PUPIL INTERESTS

The old type of vocational guidance emphasized the necessity of discovering the interests of the pupil and using those as a basis for guidance. This was before the quite recent studies in the field of behavioristic psychology, of mental testing, and the study of the characteristics of adolescent youth.

The studies of the characteristics of the adolescent have developed the fact that the interests of young people during this period are unstable, subject to constant and apparently unreasoning change. Studies in the field of psychology have developed the fact that the interests of the student often have little relationship to his intelligence, capacities, or aptitudes. At a certain period in the development of the youth, he is attracted only to the dramatic vocations, such as those of the soldier, sailor, policeman, locomotive engineer, and aviator. During a little later period, when he is susceptible to religious idealism and spiritualism, he is interested along the line of religious vocations, such as that of a minister, or preferably a missionary, where many wild beasts and savages are encountered and where he is daily called upon to perform heroic deeds. At a still later period he is attracted along the line of mechanics and invention and he continually conceives of himself in terms of a second Thomas A. Edison or Marconi. Later he wants to be a second Charlie Schwab, a Carnegie, or a John D. Rockefeller.

The girls likewise want to be teachers, second Florence Nightingales, or they idealize some person with whom they come in contact, and then want to be just whatever that person is.

### CINDERELLA IN INDUSTRY[4]

Miss Brande, out of a wealth of experience, in a recent article has developed this characteristic of the adolescent girl:

> One week they are all embryo employment managers or copywriters; when the next magazine is on the stands they beg for dress designing. "Haven't you anything in interior decorating?—or on a magazine?" "I feel that I'm best fitted for research along literary lines; do you ever have calls for just a social secretary, without typewriting and stenography?" Or—and when they say this, they are most dangerous of all—"What have you got that's interesting?" For, at any rate, if their hearts are set for the moment on a novelty, a number of other mistakes are excluded, but when the "anything-interesting" girl comes to you it is time to cross yourself and move carefully.
>
> "What have you got that's interesting?" means simply "What have you got that I can dramatize myself in?" And there you have the whole thing. The average girl comes to you in search of a background—not in search of work; in search of something becoming that she may pose herself against; in search of a colored spot light to stand in before her little world. She doesn't mean to cheat, and often in the end it is herself that she has cheated almost unforgivably, and she doesn't mean to scamp the job if she finds that it is harder than she bargained for; but she often does scamp it, and undermines her own self-confidence, and the confidence of her employer, and the chance of the right girl who may come along for that job, having looked forward to it through seasons of careful preparation.
>
> It may not seem a very threatening thing that a number of girls fresh from school and college should be pushed by circumstance and their own romanticism into positions they are totally unsuited for, and perhaps it would not be threatening if it were not for the lamentable

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[4] BRANDE, DOROTHEA, "Cinderella in Industry," *The New Republic*, vol. xxiv, No. 312.

adaptability of women. Lacking a clear objective, the girl who starts out in the first thing that offers itself as interesting is usually betrayed by her own ability to learn quickly and the very human trait of liking to do anything which one can do well without too much effort. An unmistakable failure within the first few weeks of entering the wrong work is a godsend; if it did nothing more than teach a wholesome humility and give a faint glimmering of her true economic value as an untrained worker, it would be invaluable.

It is an extraordinary candidate for a first position who has anything but the most fantastic notion of her own economic value. "My father's secretary gets $45 a week, and she never even went to high school! I certainly will not take less than $30 a week; if I did, I'd be foolish." "I know a girl who just walked into an office and got a place at $50 a week, and she didn't even know stenography." One very frank young person (major, English; minor, modern languages), who had rated her services as worth $40 a week at the lowest, put her case tersely: "Certainly a college education and great personal charm must be worth something!" She was outraged when she was told that unbridled charm was more often a disrupting than a unifying force in a busy office, and that her courses in college had not been sufficiently specialized to be of any particular value to an employer. It was only after she had heard the same thing at every employment desk in town that she came back in the right mood for advice.

All of these interests are spasmodic, sporadic, subject to constant and violent change, but during the period that the interest is held it is very difficult to persuade young people to change, or even to get them to listen to any suggestions of change.

College administrators all know the value of the outstanding all-American football player who is attending their college. It is quite reasonable to say that a large proportion of the adolescent high school boys who choose certain colleges for themselves, are materially influenced by the standing of the football team or some one out-standing figure on that football team. They are apt to conceive of themselves of being a second Poe at Princeton, Owen at Harvard, Koppisch at Columbia, Mallory at Yale, or McMillan at Centre.

In general, it is the belief of the author that little attention need be paid to these *expressed* interests of adolescent youth. It is of much greater importance that we know exactly the amount and the kind of intelligence they possess, the special aptitudes and abilities, their record of achievement in certain school subjects, the relationship of all these to certain possible occupations, and the educational opportunities and requirements for entrance to these occupations. Seldom is there any relationship between the *expressed* interest of young people, their intelligence level and aptitudes, their social or economic status, the opportunities in the vocations, and the possibilities of getting the education or training necessary to enter those vocations.

## WILLETT'S STUDY[5]

Principal Willett of the Hibbing, Minnesota, High School, reports the following results of a study on the permanence of interest of approximately 300 pupils of his school. These students were asked to fill out a questionnaire in 1916, the same questionnaire in 1917, and again in 1918. Mr. Willett reports the following results and conclusions:

> Four hundred eighty-eight high school pupils—217 boys, 276 girls—answered a 22-question questionnaire. Two hundred eighteen had answered the same questionnaire previously. For the whole group, permanence of preference for any particular school subject seems to be decidedly lacking. *They were not permanently impressed by any subject as being distinctly interesting or distinctly uninteresting.* As might be expected, the upper-class boys were more fixed in choice than the lower-class boys. All groups were characterized by changes for second and most disliked choices. All totals indicate shifting interests. The ratio of permanence was, for first choice, 14.5 to 31.2 per cent; for second choice, 1.9 to 18.4 per cent. For most disliked choice the ratio of permanence was 6.1 to 8.8 per cent.
>
> In response to the question "What do you expect to make your life work?" only 18.6 per cent of the boys named the same occupation three times; 9.3 named the same occupation twice; 24.4 per cent of the boys named three different occupations. *Vocational advice given to these boys on the basis of their expressed occupational interest would have been well placed in less than one out of five cases.*
>
> For the girls there is much greater permanence of occupational interest (possibly explained by the much more limited field)—28.8 per cent of the girls choose the same occupation three times; 75 per cent chose either teaching or stenography on at least one occasion; 21.2 per cent named a different occupation three times. *Vocational advice given to freshmen girls on the basis of expressed choice would have been correct in one out of six cases. For all girls, advice given would have been misplaced in more than two out of three cases, if based on expressed vocational choice.*

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[5] WILLETT, G. M., "Permanence of Pupil Interests," *School and Society*, vol. ix, Nos. 220–221, March 15 and 22, 1912, pp. 334*ff* and 365*ff*.

## THE THURSTONE ANALYSIS OF WORK INTERESTS BLANK

The Division of Applied Psychology, Carnegie Institute of Technology, Pittsburgh, Pennsylvania, in a scientific attempt to develop this particular field has worked out a blank entitled "Analysis of Work Interests," for the purpose of making a survey and a tabulation of the occupational interests of students. These blanks may be obtained by addressing Dr. Thurstone, Division of Applied Psychology, Carnegie Institute, Pittsburgh, Pennsylvania.

## CASE PROBLEM

### Vocational Interests

In a recent study of the vocational interests of 3,000 pupils of grades 7 to 12 in the Cuyahoga County School District adjoining the city of Cleveland, Ohio, the following questionnaire was used:[6]

1. What do you wish to do to earn your living when you have finished school? Reasons for your choice.
2. Occupation of father.
   Occupation of mother (if employed).
   Occupation of brothers (if employed).
   Occupations of sisters (if employed).
3. Check the grade in school you expect to complete.
4. Do you expect to go to school beyond the high school (twelfth year)?

### Questions

1. How permanent is the vocational choice of children in the Grades 7 to 12? What did you want to be when you were in the seventh grade? Eighth? First-year high? Second? Third? Fourth?
2. Are children in the Grades 7 to 12 competent to choose what vocation they want to enter?
3. What basis do they have for choice? What do they usually choose in certain grades? What influences them?
4. In what ways does the occupation of the father influence the vocational choice of the child? The vocations of other members of the family?
5. What do the occupations of the various members of the family indicate?
6. Is a student competent to foretell what grade he expects to complete? How can that best be foretold?
7. What factors influence the decision to attend high school?
8. Is the student competent to tell whether or not he will go to school beyond the high school? How can that best be foretold?
9. Which of the five items in the questionnaire forms a scientific basis for guidance? Which do not?
10. What would you substitute for those items you disapprove?
11. What guidance value would you attach to the results of such a questionnaire?

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[6] See "The Vocational Interests of Children," H. B. Alberty, *Industrial Art Magazine*, vol. vii, No. 7, July, 1923, p. 255 ff.

## CASE PROBLEM

### JUVENILE DELINQUENTS (UP TO 16 YEARS OF AGE)

The following table is adapted from tables on page 63 of the "Annual Report of the Children's Court of the City of New York," 1920 (137 E. 22):

TABLE IX

| Clinical classification | Males | Females |
|---|---|---|
| Normal | 33 | 27 |
| Retarded | 64 | 5 |
| Dull normal | 7 | 54 |
| Moral defective | 40 | 3 |
| Unstable | 87 | 13 |
| Border-line | 43 | 5 |
| Moron | 132 | 50 |
| Feebleminded | 40 | 5 |
| Imbecile | 24 | 6 |
| Court psychological information | 6 | 10 |
| Neurotic | 10 | |
| Psychotic | 1 | 6 |
| Psychoneurotic | 1 | 1 |
| Epileptic | 5 | |
| Totals | 493 | 193 |

TABLE X

The following table appears on page 65 of the same report:

| I.Q. | Males | Females | Totals |
|---|---|---|---|
| 20 to 29 | . . . | 2 | 2 |
| 30 to 39 | 1 | 1 | 2 |
| 40 to 49 | 9 | 6 | 15 |
| 50 to 59 | 72 | 24 | 96 |
| 60 to 69 | 133 | 52 | 105 |
| 70 to 79 | 131 | 37 | 168 |
| 80 to 89 | 79 | 42 | 121 |
| 90 to 109 | 64 | 23 | 87 |
| 110+ | 2 | 4 | 6 |
| Not determined | 2 | 2 | 4 |
| **Totals** | 493 | 193 | 686 |

"Of the 686 cases examined, physical imperfections or abnormalities were noted in 495 cases" (page 66, same report).

The table on page 15, same report, presents figures which show that the highest number of arraignments for the years 1919 and 1920 came in March, April, and May.

The following is adapted from a table on page 66:

TABLE XI

| SCHOOL GRADE ATTAINED | CASES |
|---|---|
| High school | 9 |
| Elementary school grade 8 | 19 |
| Elementary school grade 7 | 70 |
| Elementary school grade 6 | 68 |
| Elementary school grade 5 | 97 |
| Elementary school grade 4 | 97 |
| Elementary school grade 3 | 75 |
| Elementary school grade 2 | 53 |
| Elementary school grade 1 | 25 |
| No school | 1 |
| Ungraded | 120 |
| No record | 52 |
| Total | 686 |

### Questions

1. Has the I.Q. any relation to anti-social behavior?
2. Which of these children would you brand as "bad?" Could they be "good" if they tried real hard?
3. Would education help them? What kind? In what way? Would severe punishment help? Would imprisonment improve them? What would you do?
4. Is it generally true that persons of low mentality tend to present physical imperfections and abnormalities? How do you account for this? Might this prove of value to a guidance adviser? In what way?
5. Of what significance are the spring months in this matter? Can you explain this fact? Is it of value? In what way?
6. How do you account for the fact that so many had made progress in school? Is there any inconsistency between the distribution of the I.Q.'s and the distribution of school grade attained? How do you account for it? Is this of any value to the guidance advisor? In what way?
7. What about "aptitudes" in this group?
8. What principles of vocational guidance are involved in this general situation?
9. In exactly what way could adequate vocational guidance help in this general situation?

## CHAPTER IX

# THE SIX MAIN ELEMENTS OF A COMPLETE GUIDANCE SYSTEM

As is seen in Chart 13 at the end of this chapter, a complete system for vocational and educational analysis, advisement, training, placement, and supervision may be divided into six main headings, the first of which is:

### I. SURVEYS

1. **A survey of the students** of public school age in the district covered by the public school system, wherever they may be located. Information should be obtained concerning their ages, the grade they have attained, and the age-grade distribution, which in itself is a good sieve for sifting out those who are accelerated—and therefore presumed to be brighter and more able—and those who are retarded and therefore presumed to be duller, slower, and less able, or else suffering from some physical, mental, or environmental defect which hampers their progress. This survey of the students should also develop information concerning their social and economic status and family history.

2. **A survey of the educational opportunities** offered to the youth of the community. This should take into consideration all public schools, regular and special, with courses and requirements for entrance, requirements for completion, covering academic courses, prevocational courses, vocational courses, all-day, part-time, cooperative, evening, special, vacation, opportunity classes, etc. It should include also all private schools and courses. In this should be included schools conducted for private profit and those which are philanthropic in their nature, such as the Y. M. C. A. settlement classes, and endowed schools and institutes. In this survey should also be included full information concerning corporation schools, schools being run entirely by businesses and industries for the benefit of their own employees. Along with this a survey of opportunities for apprenticeship should be made.

**3. A Survey of Occupational Opportunities.**—This should include a study of opportunities open to juniors in all forms of business and industry. It should include a description of the occupation, a full statement of the entrance requirements, entrance wages, the minimum and maximum wage, and particular stress should be laid upon learning opportunities, and whether or not that which is learned becomes a means of promotion. Information should be gathered about the limitations and restrictions of the opportunities; the hazards, physical and moral; the status of the occupation—whether it is developing and growing, as in the automobile industry; or whether it is specializing and breaking up, as in the metal trades, whether it is disappearing, as is woodcarving; whether it is seasonal, as are the jewelry and millinery trades; whether it is becoming machinized, as is the shoemaking industry; whether it is unionized on the craft union basis (American Federation of Labor) or on the industrial union basis (Industrial Workers of the World); whether it is an open (non-union) or a closed (union) shop, run on the "American Plan," or the union preferential plan. What is the source of labor supply, what is the proportion of trained workers to the demand, etc.

**4. A survey of the social needs** as related to these occupational opportunities—the delinquencies of the workers, the recreational opportunities, illiteracy, the labor turnover and instability of the workers, whether the workers are homogeneous or heterogeneous and on what basis, whether they are aliens, and whether the industry is urbanized or suburbanized or in process of becoming one or the other.

**5. A survey of clinics and dispensaries** of all kinds, such as medical, dental, psychological, psychiatrical, orthopedic, etc.

## II. AN ANALYSIS OF THE INDIVIDUAL'S QUALIFICATIONS AND LIMITATIONS, THE REQUIREMENTS OF THE JOB, AND THE DESIRABILITY OF THE JOB

**1. Physical Assets and Limitations.**—In making an analysis of the qualifications and the limitations of the individual, we must consider his physical assets and limitations. To the uninformed person it is surprising to find the apparently peculiar physical requirements and limitations that a thoroughgoing job analysis brings forth. For instance, a telephone operator in a central station must be able to reach with both hands at least

60 inches. If she cannot do this, no matter what other qualifications she has, she is automatically eliminated from consideration.

Flat feet, poor eyesight, and other physical defects in many occupations constitute a bar to progress in that occupation. In other occupations certain physical qualifications are absolutely necessary. A stout girl could not become a salesperson behind a counter. A stout boy would have difficulty getting along in a foundry, where the work requires constant bending over. Either would have difficulty working in a stockroom filling orders, where they would have to climb narrow ladders and squeeze into narrow spaces between counters and shelves.

**2. The educational requirements and limitations** of the job must be ascertained, so as to discover whether an individual possesses them and, if not, to place him in possession of them. Some jobs make no requirements in regard to education. It is quite a shock to the average school man to find out how little of what the school teaches is actually used in the majority of occupations.

Many employers say that they want an eighth-grade graduate or a high school graduate, but if he is asked "why," you would find that they had no clear conception of just why. If the matter is pushed to a conclusion it will be developed in the majority of cases that the employer, by the trial-and-error method, has discovered that certain people who have graduated from certain grades prove most satisfactory. On analysis it will almost always be found that these individuals have been a success not because of what they have learned in school, but because they have had the intelligence necessary to complete the required grade in school and that same intelligence makes them a success on the particular job. Occasionally, however, one does find a job where good penmanship, the ability to write a good report, the ability to do mechanical drawing, a little knowledge of chemistry, the ability to handle fractions or decimals, or a good knowledge of geography is necessary. But these cases are surprisingly rare.

**3. The social assets and limitations** of the individual. This is much more important than many people conceive it to be. The ability to enter an office quietly and with dignity, or the ability to meet people, and work with others, to make a good appearance and fit into the surroundings is highly desirable in many cases. In New York City it is very difficult for a girl stenographer, even if she be a good one, to get and hold a position if she is not good looking and well dressed, or if she is over-stout or over-thin, or has any blemishes of physique, eccentricities or mannerisms.

**4. The Economic Status.**—We must also take into consideration the economic status of the individual and his family. There is little use urging an intelligent boy, 14 years of age, to become a lawyer or a surgeon if he is the oldest of a family of six with a widowed mother who has to take in washing to support her family. On the other hand, if an individual is a little below normal in intelligence and capacity to work, but has plenty of money available for private tutors and time for repeating class work, these facts often materially affect the decision and the result.

**5. The Possession of Marketable Skill.**—In making such a study of the individual, one is often surprised at the possession of some specific skill which is readily marketed. At the present time many young boys have marketable skill along the line of radio operation or the handling or care of automobiles. This survey field is full of surprises and must not be overlooked.

**6. The Level of Intelligence.**—Probably the most important of all the qualifications of the individual is the intelligence quotient, or the amount of intelligence he posesses in relation to his chronological age. This can only be found by giving intelligence tests either individually or in groups, but no guidance system can be dignified by the name unless it uses intelligence tests, among many other more or less scientific devices.

It is possible in some cases to ascertain in a more or less crude way whether an individual is normal in intelligence or not, by finding the age and school grade attained. It is now known that the average child of normal intelligence should graduate from the eighth grade at the age of 14 or 14½, adding one more year to that age for each year in high school. At the same time, of course, illness, change of school, long periods of absence, etc., must be taken into consideration. Above all, we must know whether or not it was, or is, the practice of the school authorities to promote on an age or repeater basis, as well as on a strict achievement basis.

**7. School Achievement.**—We must also take into consideration the student's achievement in various school subjects. Achievement tests are now quite common and are well established in well-organized public school systems. To guide a child properly we should know whether he or she has achieved as much in the ordinary school subjects as a normal child should. If he has achieved less, he should be segregated for further diagnostic study.

**8. The question of the aptitudes** of an individual is a difficult thing to discuss in the present status of research work in that subject. There is no common agreement as to what the aptitudes are. Some workers in this field claim the isolation of a clerical aptitude, a mechanical aptitude, a musical aptitude. Others say that it is not possible to isolate such aptitudes, but claim that the capacity for visual imagery, for audile imagery, for ability to discern and analyze, for ability to manipulate, constitute the only basis for the isolation of the so-called aptitudes. This question of aptitudes is one of the most unsatisfactory things we have to deal with in this entire field of guidance, and has been discussed more at length in Chapter XIX.

**9. Major Characteristics.**—We should also take into consideration the main characteristics of the individual. Sometimes these characteristics are racial or national, sometimes they are purely individual. The outstanding characteristics that should be noted are: Is the individual excitable or phlegmatic? Nervous or well controlled? Self-conscious, easily thrown out of balance, or always under control? Energetic or languid? Does he take pleasure in work or otherwise? etc.

**10. The expressed interests** of the individual should also be noted, although it will be found in the majority of cases that the interests of the individual during the adolescent period are impermanent, constantly shifting and changing, apparently without rhyme or reason.

**11. The avocations** of the individual should be noted. In many cases these will prove a profitable source of study.

**12. Psychopathology.**—Finally, the condition of the individual should be noted as regards any complexes, conflicts, psychoses, neuroses, signs of hysteria, illusions, delusions, etc., which would make the case one for study by a psychiatrist.

### AN OUTLINE FOR DIAGNOSIS[1]

In *Bull.* No. 1, "Diagnosis and Treatment of Young School Failures," we find the following outline for diagnosis:

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[1] WOOLEY, H. T. and FERRIS, E., "Diagnosis and Treatment of Young School Failures," *Bull.*, No. 1, U. S. Bureau of Education, Washington, D. C., pp. 109–110, 1923.

1. The first point to consider is the *mental level* of the child. It may be low enough to be a sufficient explanation of the failure.

2. The second point to consider is the *child's academic history*. Regular attendance at good schools for a period which should have resulted in visible school progress, but has not, is an unfavorable symptom. Very irregular attendance or very poor school opportunities are favorable symptoms.

3. The third point for investigation is the child's *state of health*. The points of most common importance are the condition of vision and hearing, the nourishment of the child, the state of tonsils, adenoids, and teeth, and the possibility of anaemia, tuberculosis, or syphilis. The glands of internal secretion may prove to be of great importance to mental state, but the evidence is not yet convincing. In our experience, we have had few instances in which physical condition alone seemed to us responsible for bad school failure. The fact that it is a contributing cause, and should be looked after even if it were not, is incontestable.

4. The fourth point, and the most difficult of determination, is the *general mental tone and attitude of the child.* Under this head the points to consider are:

(*a*) *Mental distraction* due to anxiety usually caused by poverty or by unhappy relationships in the family, such as constant quarreling of the parents, immoral behavior of the parents, divorces, or cruelty toward the children.

(*b*) *Personality conflicts* between the child and his parents or between the child and his teachers.

(*c*) *Obsessions or fears,* having to do with religious ideas or with sex.

(*d*) *Special disabilities.*

(*e*) *Character defects,* such as excessive shyness, or abnormal stubbornness, which, as far as our present knowledge shows, may be congenital, or may be due to the experiences of infancy and the preschool period.

(*f*) *Psychopathic conditions* which are quite certainly hereditary in children of this age, and cannot be sharply delineated from what we have called character defects, except by their more extreme and unaccountable manifestations.

The relative importance of these mental factors differ enormously from case to case. Those due to *external causes,* such as poverty or unfortunate family relationships, are the most hopeful both because the cause may be removed, and because the mental attitude may be directly modified through personal influence. In general, the larger the hereditary factor the more difficult the task of modifying the mental state. However, since we cannot know at present which traits are truly hereditary and which may have been induced by early experience, we can only assume that all are modifiable by wise treatment, and do our best. It is somewhat surprising that in the cases in which we have thought the hereditary factor largest we have been more successful in reforming behavior than in inducing school progress.

5. The fifth and final point is the *heredity of the child*. It is exceedingly important to know, but very difficult to get, except in so far as the immediate family reveals it, unless one has facilities for social research which are not now at the command of any school system. A definite knowledge of a psychopathic heredity is, of course, a very unfavorable factor.

**13. The Requirements of the Job.**—First of all we must ascertain the exact physical requirements and limitations of the job. These may be expressed in terms of age, sex, weight, height, or any other of the numerous physical capacities, defects, and incapacities.

**14. The educational requirements and limitations** of the job come next. In general, it will be found that the majority of the jobs open to juniors have few educational requirements. It will also be found, of course, that the higher up in the scale of jobs the more exacting and specific become the educational requirements as set up by the job itself. For instance, the educational requirements for entrance into law, dentistry, and medicine are high and specific. All the way between the high and low extremes there is a wide range of requirements in education, training, and experience.

**15. Intelligence Requirements and Limitations.**—At the present time it is being developed that it is possible to arrange all jobs and occupations, including the professions, into a sequence expressed in terms of the intelligence required in order to perform the duties of the job successfully. This sequence has been developed by the psychological group in the Army, and is of the utmost significance to the vocational guidance movement, to the individual, and to society in general.[2]

On the other hand, a definite understanding is just being developed of the amount of intelligence required to succeed in passing certain grades in our elementary schools, high schools, and colleges, and also the amount of intelligence necessary to succeed in certain courses within these schools and colleges.[3]

**16. The job should also be studied to discover the occupational skill necessary for entrance.** Sometimes this is expressed in terms of successful experience on a job of similar character, sometimes in terms of the completion of certain school courses which presumably equip one with the occupational skill necessary for entrance to the job. A good illustration of this is the position of stenographer or typist.

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[2] See p. 308.

[3] See pp. 135–138.

**17. Again we have the question of desirable aptitudes.** There is a steadily growing belief that more scientific job analyses will show that certain aptitudes are highly desirable—in fact, almost necessary—for success in certain occupations. For instance, the pattern maker, the sheet-metal pattern drafter, the dress designer, the architect must have a capacity or an aptitude for visual imagery. The stenographer and the telephone operator must have a capacity or an aptitude for audible imagery; the jeweler and the watchmaker must have a capacity or an aptitude for manipulation; the lawyer and industrial engineer must have a capacity or an aptitude for analysis and synthesis, diagnosis, and discernment. The exact relationship between these aptitudes is not as yet entirely clear.

**18. This job analysis should also show the personal characteristics desirable.** For instance, in running a barbed-wire machine or a nail-making machine, the chief element to be considered is that the worker be phlegmatic and stolid. A nervous, temperamental, highly organized individual would not last a day on such jobs. On certain operations in shoe factories or in garment making, where power machines are used, we need highly organized intensive people with quick reactions.

**19. The promotion opportunities of the job** are important, although in many cases this is over-emphasized. The writer believes that *most promotion for juveniles will be found in leaving one job and starting on another*—in other words, going from a juvenile low-level job to a job on a higher level.

Sentimentalists in guidance bewail the rapid change of juveniles from one job to another. In many cases this change is a good thing. As soon as they exhaust the possibilities of any one job they should get another, provided it is on a higher level. When we have developed real guidance systems we will assure ourselves that the new job is on a higher level.

**20. Learning opportunities** are very important for the adolescent. Strange to say, it does not matter very much what he is learning so long as he is learning something. It is a bad thing for a normal adolescent to work for long periods of time at intensive, monotonous, repetitive jobs. If he is a normal, or above-normal individual, the chances are that he will not stay unless the remuneration is high, or unless conditions make it imperative that he stay on that particular job.

On the other hand, much time is wasted and emotion lost on bewailing the condition of certain individuals who are working at these monotonous, repetitive jobs. We should keep in mind the fact that *it is a good thing for subnormal people that industry offers these monotonous jobs* which are largely automatic, require practically no judgment or thinking, and little intelligence, or otherwise they would be unable to find any kind of employment and would not be able to maintain themselves. Furthermore, these subnormals are happy and contented performing tasks which would be unbearable to the normal or superior individual.

**21. The desirability of the job** should also be kept in view. There are certain jobs that are in many respects good jobs, but, on account of the nature of the work, the location of the plant, the type of worker employed, the type of employer, foreman, or supervisor, the job is undesirable.

**22. Labor Laws.**—Vocational guidance counselors should be well acquainted with Federal State and Municipal labor laws, especially as they affect certain well-defined jobs. Some jobs are prohibited for certain people, others are classed as hazardous occupations; other jobs are open only to minors or adults after certain requirements have been met in regard to the safeguarding of machinery, the drawing off of noxious fumes, etc.

The importance of this feature is indicated by the fact that the State of New York has recently passed a law (1924) providing that triple compensation shall be paid to any minor working at a forbidden occupation. Furthermore, that this excess compensation shall be paid by the employer and not by any liability company.

**23. The permanency of the position** should also be considered. While it would be difficult to set up an acceptable definition of permanency, still we feel that many children are seriously injured, educationally, by over-zealous counselors and placement officers who, desirous of making a record, place numbers of juniors in the fall of the year, especially just before Christmas, either on full-time, part-time, or Saturday jobs, whereby the school work is neglected, the student falls behind, gets low marks, or is reported for failure, and, in addition, he gets a taste of money earning under abnormal conditions, a combination which often leads to a permanent severance of the individual from school.

### III. THE MAKING OF AN ADVISED CHOICE

1. **The adviser** should take the lead in making this advised choice. He, or she, has the knowledge that comes from an analysis of the individual, his capacities, abilities, and limitations, and also the knowledge of the requirements, possibilities, and limitations of the occupations, the opportunities that are inherent in the occupations, the educational opportunities open to this particular type of individual, the social and economic status of the student, his heredity, and a fairly accurate knowledge of his environment.

2. **The ambitions of the parents** for their child should be considered, but should not be taken too seriously. In general, parents are not competent to choose a vocation and start their child upon any line of education or training leading to that vocation. Usually, their ambitions are away beyond the capabilities of the child or the possibilities of the situation and are often based upon a feeling of vanity or of emulation of some neighbor or near relative.

The parents themselves should be questioned and studied as to their heredity, probable intelligence level, and economic and social status, as indicated by the amount of rent paid, the father's occupation, the occupation of other children, their education, and the education of the parents.

3. **The Student.**—All of the above factors focus in the study of the student himself. We can ascertain quite accurately the level of intelligence. Along with this we should study attitudes, habits, behavior, reactions, interests, ambitions, skills marketable and otherwise, avocations, mental states, and so far as is possible special intelligences or aptitudes.

### IV. EDUCATION AND TRAINING

The two terms "education" and "training" are used in this connection for making a distinction that may not be apparent otherwise. Vocational *education* may be broken up into three phases:

1. The acquirement of skill.
2. The acquirement of related knowledges.

3. The acquirement of social and economic attitudes and relationships.

On the other hand, vocational *training* is considered as being limited to the acquirement of skill. At the same time it is readily admitted that there can be no training without education, but for the purpose of keeping clear in the mind of the reader the two types of vocational education, one broad, the other narrow, the two terms "education" and "training" are used to designate them respectively.[4]

**1. Academic Education.**—Many times a system of vocational guidance will develop the fact that an individual needs further academic education, often for the acquirement of such vocational tools, as arithmetic, English, spelling, penmanship, or it may be developed that he needs further academic education in terms of grade attainment to satisfy the entrance requirements to some vocation.

Possibly he needs academic education from the standpoint of citizenship training, for making adjustments, or for trying out certain courses or possible abilities. Academic education also may be necessary as preprofessional work. We are now instituting in our high schools preprofessional courses preparatory to entering upon professional courses in law, medicine, dentistry, and engineering. Our mechanic arts courses in high schools are nothing more nor less than preprofessional courses for the engineering colleges.

**2. Try-out Courses, Self-discovery Courses.**—Often a student who has grown dissatisfied and discontented with his school work may be guided back into school for the purpose of taking the so-called try-out courses and self-discovery courses for the purpose of discovering and developing abilities and capacities along certain lines. The values, the distinctions, and the limitations of try-out courses in general, and of the "Ettinger" plan, the "Russell-Bonser" plan, the "Gary" plan, and the "Pittsburgh Combination" plan in particular, must be kept clearly in mind.[5]

**3. Short-unit Courses.**—The vocational adviser must be well acquainted with any short-unit courses offered—opportunity classes, general continuation classes, in-and-outer classes, or any

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[4] See Payne, A. F., *Administration of Vocational Education*, McGraw-Hill Book Company, Inc., New York, 1924, chap. II.

[5] *Ibid.*

*classes of similar nature that may be available for these particular students. These are also often found in the all-day trade* schools, both private and public, in the evening trade extension classes, evening trade preparatory classes, private schools, endowed schools, and philanthropic schools, as well as in dull-season classes. The corporation schools and vestibule schools also offer short-term units of vocational training previous to entrance to the job.

**4. Vocational Education.**—After the occupation has been chosen the question then arises as to whether or not it is necessary to be educated or trained for entrance to that vocation. In case there are no specific skilled requirements set up for entrance to the vocation, the student is ready at once to enter upon the duties of the job. If it is shown, however, that entrance to the job is open only to those who have been educated for it by taking a vocational education course, the task then follows of advising the student as to just which vocational education course is best.

Vocational education courses generally may be divided into long-term courses, short-term courses, and part-time courses. Under long-term courses we have those in the all-day unit trade school, those in the all-day general industrial school, cooperative courses, apprenticeship courses, correspondence courses, and extension courses.

## V. PLACEMENT

**1. Self-placement.**—Placement, in general, may be classified under two headings—self-placement and assisted placement. Self-placement is frequently nothing more nor less than chance placement. In the majority of placement offices connected with our public schools, the element of chance in the placement of boys and girls is very large. Frequently, placement is performed by following the advice of friends and relatives, the making of inquiries, the answering of advertisements, or the following up of help wanted signs.

**2. Assisted placement** is placement which is done through the machinery of the school placement office, the coordinators, the Federal Junior Employment Service, the Federal Senior Employment Service, the State Employment Service, private employment agencies who handle general employment, or other employment agencies who limit their fields to special employ-

*ment, such as the placement of stenographers and office workers, common labor and houseworkers, or trained college women.*

There are also the employers' agencies, such as those maintained by the United States Steel Company; the manufacturers' association agencies, such as those maintained by the Building Trades Association, and the Metal Trades Association, philanthropic agencies, such as the Y. M. C. A., the Y. W. C. A., the K. of C., the Y. M. H. A., the Rotary Club, Big Brothers, Boy's clubs, settlement houses; and the offices of individual employment managers.

### VI. SUPERVISED PROGRESS ON THE JOB

As industry is organized at the present time, and because of the significant changes taking place in industry, it is becoming increasingly necessary that some agency have the oversight and the care of the employed youth up to at least a minimum of 18 years, with ultimate oversight up to 21 years. At the present time, the logical agency is the public school, although it may develop later that some other agency can better perform that service.

Students of guidance must keep clearly in mind that guidance is not a thing that can be done once and for all, except in rare cases. It is a process that must be repeated from time to time, as the individual develops either in age, ability, or as some special capacities or limitations show up as a concomitant of his environment. This makes it absolutely necessary that we have a system of supervision and adjustment on the job.

**1. Checking the Guidance.**—This supervised progress on the job is also necessary as a means of *checking up* on the guidance that is done; and also as a means of ascertaining the measure and the manner of the functioning of our public school education.

**2. Progress by Short Units.**—This progress on the job may be in terms of short-term units or of long-term units. It may be advisable to place an individual in a juvenile job with the expectation that quite soon he will exhaust the possibilities of that job and will need to be replaced on a job of a higher level. It is also quite possible that the best thing to be done for some juvenile worker is to place him in one of the so-called "blind-alley" jobs for a short period of time.

Many desirable jobs have *alternative jobs* which the workers enter during the dull season. It may be advisable for an indi-

*vidual to be placed in this alternative job before he enters his main vocation. Sometimes he should be placed in a seasonal job, often with the idea of a try-out to discover his fitness, his liking, and the possibilities of the individual and the job.* It is also possible for the individual to make progress by following a sequence of jobs arranged in promotional order.

**3. Progress by Long Units.**--This brings us logically to the question of long-term units. Progress is assumed in the long-term unit of instruction, such as an apprenticeship or a sequential progress in the vocation by progressing from one unit to the next higher, or of various jobs in the unit, or of various operations and processes on the separate jobs. In any case, arrangements must be made so that the individual may keep on progressing to the limits of his own capacities and possibilities. In other words, vocational guidance does not end with the placement of the individual in a job. It means not only placement, but replacement, adjustment, and readjustment, the main idea being the utmost progress of the individual, not only for the benefit of society but for the ultimate benefit and happiness of the individual.

CHART 13.—AN OUTLINE FOR VOCATIONAL AND EDUCATIONAL ANALYSIS, ADVISEMENT, TRAINING, PLACEMENT, SUPERVISION AND PROGRESS

- I. A SURVEY OF.....
  - Students...........
    - Ages.
    - Grade attained.
    - Acceleration.
    - Retardation.
    - Elimination.
    - Social status.
    - Economic status.
  - Educational Opportunities.
    - Public schools and courses.
    - Academic.
    - Prevocational.
    - Try-out courses.
    - Trade-finding classes.
    - Vocational.
    - Private schools and courses.
    - For private gain.
    - For special purposes.
    - Philanthropic schools and courses.
    - Endowed schools.
    - Supported schools.
    - Corporation schools.
    - Apprenticeships.
    - Training deparments in stores, factories, offices.

### CHART 13.—*(Continued)*

- I. A SURVEY OF..... *(Cont.)*
  - Occupational Opportunities.
    - Description.
    - Minors employed.
    - Sex employed.
    - Entrance requirements and limitations.
    - Wages:
      - Entrance.
      - Median.
      - Maximum.
    - Learning opportunities.
    - Promotion opportunities.
    - Learning period.
    - Restrictions.
    - *Hazards:*
      - Physical.
      - Moral.
    - *Status:*
      - Developing.
      - Disappearing.
      - Specializing.
      - Unionized.
      - Labor supply.
      - Seasonal.
      - Transitory.
      - Machinizing.
    - Proportion of workers to demand.
  - Social Needs Concerning.
    - Delinquency.
    - Recreation.
    - Illiteracy.
    - Instability of labor.
    - Heterogeneous population.
    - Alien population.
    - Urbanization.
  - Clinics . . . . .
    - Medical.
    - Dental.
    - Psychological.
    - Psychiatrical.
    - Orthopedic.
    - Dispensaries.
- II. ANALYSIS OF....
  - The Individual's Qualifications and Limitations.
    - Physical assets and limitations.
    - Educational assets and limitations.
    - Social assets and limitations.
    - Economic assets and limitations.
    - Marketable skills.
    - Intelligence quotient.
    - Subject quotients.
    - Achievement quotient.
    - Aptitudes.
    - Characteristics.
    - Interests.
    - Avocations.
    - Personal appearance.
    - Psychoses and neuroses.

CHART 13.—(*Continued*)

- II. ANALYSIS OF..... (*Cont.*)
  - The Requirements of the Job.
    - *Physical requirements and limitations.*
    - *Educational requirements and limitations.*
    - *Intelligence requirements and limitations.*
    - *Experience requirements.*
    - *Occupational skill necessary for entrance.*
    - Labor laws.
    - Aptitudes desirable.
    - Characteristics desirable.
  - The Desirability of the Job.
    - Promotion opportunities.
    - Learning opportunities.
    - Permanency.
    - Others included in I—"Occupational Opportunities."
- III. ADVISED CHOICE ON BASIS OF
  - Adviser............
    - Analyses of:
      - Individuals.
      - Occupations.
      - Opportunities.
    - Status.
    - History.
    - Environment.
    - Interests.
    - Ambitions.
  - Parents............
    - History.
    - Inheritance.
    - Status.
    - Ambitions.
    - Occupations.
    - Education.
  - Student............
    - Reactions.
    - Attitudes.
    - Habits.
    - Behavior.
    - Interests.
    - Ambitions.
    - Skills, marketable and otherwise.
    - Avocations.
    - Intelligence.
    - Mental states.
    - Aptitudes.
- IV. EDUCATION AND TRAINING
  - Further Academic Education for.
    - Acquirement of vocational tools.
    - Preprofessional work.
    - Entrance requirements for vocation.
    - Citizenship training.
    - Adjustments.
    - Try-outs.
  - Prevocational Try-outs, Self-discovery.
    - The Ettinger plan:
      - Separate shops.
    - The Russell-Bonser plan:
      - General industrial arts shop.
    - The Gary plan:
      - Supervised production work.
    - The Pittsburgh Combination plan:
      - Short units.
      - Opportunity classes.
      - General continuation school.
      - In-and-outer classes.
      - Trade-finding classes.

CHART 13.—(*Continued*)

- IV. EDUCATION AND TRAINING (*Cont.*)
  - Vocational Education.
    - Long-term:
      - All-day unit trade school.
      - All-day general industrial school.
      - Cooperative courses.
      - Apprenticeship.
      - Correspondence courses.
      - Extension courses.
    - Short-term units:
      - Opportunity schools.
      - Part-time classes.
      - Trade extension.
      - Trade preparatory.
    - Evening classes.
    - Smith-Hughes trade extension.
    - Non-Smith-Hughes trade preparatory.
    - Private, endowed, philanthropic schools and classes.
    - Corporation schools.
    - Vestibule schools.
    - In-and-outer classes.
    - Dull-season classes.
- V. PLACEMENT......
  - Self-placement. ....
    - Advertisements.
    - Friends.
    - Relatives.
    - Signs.
    - Inquiry.
    - Letters.
    - Interviews.
    - School placement office.
  - Assisted Placement.
    - Coordinators.
    - Federal Junior Employment Service.
    - Federal Senior Employment Service.
    - State Employment Service.
    - Private employment agencies.
      - Specialists' agencies.
      - Employers' agencies.
      - Manufacturers' association agencies.
    - Philanthropic agencies:
    - Y. M. C. A.
    - Y. M. H. A.
    - Y. W. C. A.
    - K. of C.
    - Rotary Club.
    - Big Brothers.
      - Probation officers.
      - Boys' clubs.
      - Settlement houses.
      - Employment managers (individual).
- IV. SUPERVISED PROGRESS ON THE JOB UP TO A MINIMUM OF 18 YEARS OF AGE
  - Short-term Units...
    - Juvenile jobs.
    - Blind-alley jobs.
    - Boxed-in jobs.
    - Alternative jobs.
    - Seasonal jobs.
    - In-and-outer jobs.
    - Progress from job to job.
    - Promotional sequence of jobs.
  - Long-term Units....
    - Helper.
    - Apprenticeship.
    - Systematic sequential progress in vocation by:
      - Units of the vocation.
      - Jobs of the units.
      - Operations and processes of the jobs.

The entire process should result in:

$\left.\begin{array}{l}\text{1. Placement and replacement}\\ \text{2. Adjustment and readjustment}\end{array}\right\}$ as necessary.

3. Progress of the individual to the utmost in terms of service to society and individual happiness.

## CASE PROBLEM

### The Ten Items of Massachusetts Examination

The *Bulletin* "The Inauguration of a State-wide Public School Mental Clinic in Massachusetts," by Dr. Walter E. Fernald, published by the National Committee for Mental Hygiene, New York, 1922, page 3, advances the following ten fields of inquiry as necessary for a thorough understanding of difficult school children:

1. Physical examination: bodily constitution and make-up.
2. Family history: heredity.
3. Personal and developmental history: capacity for family and social adaptation.
4. History of school progress: school record.
5. Examination of school work: pedagogical measurements.
6. Practical knowledge and general information.
7. Economic efficiency.
8. Social history and traits: environment.
9. Moral reactions: psychometric examinations, complexes.
10. Psychological examinations: clerical record.

The examinations are conducted by traveling clinics composed of:

1. A psychiatrist.
2. A psychologist.
3. A social worker.
4. A clerk.

The children examined are selected by the local school authorities. There is no standard method in use for making this selection.

### Questions

1. How can society as represented in this case by the state justify such a proceeding as this state-wide examination?
2. What ground does the psychiatrist cover?
3. What ground does the psychologist cover?
4. With which of the ten items would the work of the psychiatrist and the psychologist be most closely related?
5. Which of the three examiners would deal with aptitudes?
6. Under each item make a list of standards, scales, tests, measures, that are available.
7. Does this constitute guidance? If not, why not? If so, who does it?
8. What principle of scientific guidance is involved?
9. What are the probable methods of selection used by the school authorities in selecting these children (4,500 up to May 1, 1922)? Which are sound? Which unsound? Why? What would you recommend?
10. What other fields of inquiry would you recommend?

## CASE PROBLEM

### EMPLOYMENT SUPERVISION

In the outline for a complete guidance system the sixth phase is given as "Supervised Progress" on the job. This is a new, and some people consider it a radical proposal. Before we can reasonably advocate such a step, we should be in a position to answer several questions, such as:

### Questions

1. Why should we have employment supervision? For whose benefit? What *right* have we to claim authority over the child after he has left school?
2. What possible and probable benefits might be derived by (*a*) the student? (*b*) the employer? (*c*) the teachers? (*d*) the adviser? (*e*) the coordinator? (*f*) the school curricula? (*g*) the educational administrator?
3. When should this supervision begin? End? Should this supervisory term begin and end alike for all children? Should it be measured in terms of chronological age? In terms of mental age? In terms of potentiality? Vary with the job? Estimate the length of a short supervisory period? A long period?
4. Who should pay the cost of this employment supervision? The worker? The parents? The employer? The public?
5. Who should do this employment supervising? The foreman? The teacher? The adviser? The coordinator? The employer? Some special person? A supervisor?
6. How should this employment supervision be done? By law? By contract? By verbal agreement? By individual arrangement? Through sequence of promotion? Through employment department? Through arrangement with foremen?
7. How should we measure promotion? By increase in pay? Increase in responsibility? Increase in supervision? Opportunity to learn? Difference in work? Increased prestige? Easier work? Harder work? Shorter hours? "White-collar" job?
8. What forms, blanks, record system do you recommend to make employment supervision effective?
9. Some vocational schools give a diploma only after successful practice in the vocation. What are the advantages and disadvantages of this plan? What benefits derived by student? School? Employer?

## *CHAPTER X*

# THE STRATEGIC POINTS IN SCHOOL SYSTEMS FOR VOCATIONAL GUIDANCE

When an administrator is faced with the task of organizing a system of vocational and educational advisement, the first problem he has to solve is where to begin the work. An analysis of the school system will show that, in general, there are ten particular points which may be called strategic points for guidance. These are as follows:

### THE TEN STRATEGIC POINTS

**1. The 13-year old pupils,** who are located usually in the fifth, sixth, and seventh grades. The guidance administrator should first make a survey of these 13-year-old students. Assuming that the compulsory school age limit is 14, then the administrator has one full year in which to do guidance work before these students can possibly leave school. *The most hopeless time to begin guidance is when the student walks into the office announcing that he is* 14 *years old, has got a job, and is leaving school.*

The survey of these 13-year olds will doubtless show that they are scattered throughout the entire school system. A survey by Ayres[1] gives us the following data:

> The study included all of the cities of between 25,000 and 200,000 population. [The purpose of limiting the field in this method was to eliminate the small towns and the large cities where conditions would be somewhat extraordinary.]
>
> The object of the investigation was to gather facts concerning the boys in these cities who had reached the limit of the compulsory-attendance period and the fathers of these boys. [Note how the field is again limited. They are considering only the boys who have reached the limit of the compulsory-attendance period and the fathers of these boys.]
>
> The purpose of this study was to secure a more definite fact basis for thought and action in the field of industrial education. [Notice that

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[1] Ayres, Leonard P., *Some Conditions Affecting Problems of Industrial Education in Seventy-eight American School Systems,* Russell Sage Foundation, New York, 1916.

See also page 150 of this volume.

girls are not included because the problem of industrial education for girls is complicated by the fact that girls should be trained, at some time or other, in the vocation of homemaking, and many times go into industrial work or professional work as a temporary occupation until marriage. So, by eliminating the girls from this problem, it has been much simplified.]

The first data secured were those showing the school grades of the boys. The tabulation of these figures brought to light two significant facts. The first was that *these boys who have reached the limit of the compulsory-attendance period are scattered through the grades from the kindergarten to the senior year in the high school.*[2] [Although they are all of the same age, they represent every stage of school advancement and are scattered through grades normally representing 13 years of school progress--one of kindergarten, eight of the grades, and four of the high school.]

The second significant fact is that one-half of them are in the sixth grade or below. [It is necessary that we appreciate the significance of the fact that one-half of the 13-year-old boys in these cities were in the sixth grade or below.]

These studies indicate that large numbers of these boys may be expected to leave school soon and go to work with an educational preparation so inadequate that they cannot enter the ranks of industry with profit either to themselves or to the community.[3]

These figures which show the grades of the children who have reached the limit of the compulsory-attendance period constitute one of the simplest and most significant measures of the efficiency of the city school system in carrying its children through the grades.[4]

The data giving the birthplaces of the boys and their fathers show that *only one father in six is now living in the city of his birth, and that among the boys only a few more than one-half are now living where they were born.* These facts are significant because it has been urged that the schools should develop courses of industrial education that will directly prepare the children to enter the local industries. But if present conditions maintain in the future, the great majority of adults are not going to work in the same communities in which they received their schooling. The data collected also show that *about one-half of the fathers work in the building trades or in manufacturing.* This fact is important because plans for inaugurating systems of vocational education are commonly based on the proposition that a large majority of young people in our city schools will find their life work in these industries.[5]

Three significant facts are brought to light by the figures of occupations of the fathers. The first is that more of these men are in professional work than there are engaged in unskilled labor. The second is that the group of managers, superintendents, and proprietors is practically as large as that made up of some skilled laborers. The third is that the mental workers constitute more than one-third of all the workers. [This fact is significant in view of the statements that vocational education is now concerned with the training of the extraordinary mechanic, the one who eventually will become the foreman or superintendent; *that in vocational education the emphasis be placed upon education; that we train only for those vocations that have a large measure of educable content.*][6]

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[2] *Ibid.*, p. 3.

[3] *Ibid.*, p. 4.

[4] *Ibid.*, p. 5.

[5] *Ibid.*, p. 7.

A similar survey should be made by every administrator in order to take care of the group that will surely leave school at 14 years of age (or the end of the compulsory-attendance period), or quite soon after. If it were possible, it would be advisable to take this group and organize it into special classes, giving the students a wide variety of tests which would not only give to the adviser specific knowledge concerning these students but would also indicate to the students themselves the possession or nonpossession of certain abilities.

This group should also be given specific occupational information, organized on the case group-method basis as indicated in Chapter XVI.

The major portion of their time should be spent in doing practical work along the vocational lines that seem to be indicated for them. It will generally be found that the students who are leaving school at 14 will be located in or below the seventh grade. They are generally retarded more or less, are not doing particularly good school work, have acquired a sense of failure and dissatisfaction, and are looking eagerly toward the release from school work, expecting that life will be much easier when they leave school and enter business or industry. They are motivated strongly by the idea of going to work, getting a job, and earning money. They are generally quite willing to work and work hard at tasks that seem to lend themselves toward the fulfilment of this desire and the carrying out of this motive.

**2. High School Freshmen.**—The second strategical point is the *freshmen year of the high school.* In general, the public schools lose more than one-half of the freshman high school class during the freshman year. There are many reasons for this which will not be gone into here. It is enough for us to recognize that this condition exists, and the problem that is raised in regard to guidance.

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[6] *Ibid.*, p. 16.

The majority of the students who leave during the freshman year will be found to be failing in one or more subjects. Apparently, they have reached the level of their ability to do formal school work as at present organized in the average high school. It may be that a reorganization of our system of high schools, of curricula and courses, of standards and offerings, and of methods of teaching would hold them longer. It may be that they lack the intelligence to go farther, and that they would not profit from any kind of formal school work. This group needs careful treatment from the standpoint of guidance. Probably they are the most difficult group to handle. In general, they will be found to range around normal in intelligence, and in many cases they may be guided from one course into another better suited to their aptitudes, capacities, and needs, and thereby kept in school longer. The following tables indicate the possibilities of the use of intelligence rankings for vocational and educational guidance with this particular group.

TABLE XII.—THE LEVELS OF INTELLIGENCE NECESSARY FOR SUCCESS IN HIGH SCHOOL COURSES[7]

| Graduates | Range of middle 50 per cent of I.Q. | Type of intelligence |
|---|---|---|
| High School Academic Course | 110–118 | Superior and high average |
| High School Commercial Course | 103–114 | High average and average |
| High School Technical Course | 102–114 | High average and average |
| High School Industrial Arts Course | 97–108 | Average |
| High School Dressmaking Course | 91–102 | Average and low average |
| Trade School | 78– 96 | Low average and dull normal |
| Elementary School | 91–115 | High average, average, low average |
| Continuation School | 66– 86 | Dull normal and subnormal |

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[7] **Clark, R. S.**, *Vocational Service for Juniors*, New York, 1923.

Dr. Book gave to 6,188 senior students (2,477 boys, 2,711 girls) in Indiana high schools, the Indiana University Intelligence Scale (Pressey), an omnibus test comprising ten tests of 20 items each, with the following results:

TABLE XIII.—MEDIAN INTELLIGENCE SCORES FOR STUDENTS GRADUATING FROM VARIOUS HIGH SCHOOL COURSES[8]

| High school course | Median score |
|---|---|
| Academic | 142 |
| Commercial | 139 |
| Commercial | 138 |
| College Preparatory | 137 |
| General | 136 |
| Vocational | 135 |
| Scientific | 134 |

The foregoing data indicate that certain courses require or select higher levels of intelligence than others. The same would be true if, instead of being specialized courses, they were specialized high schools. The following chart indicates that certain schools also require or select varying levels of intelligence from among the student body.

### SELECTION BY THE CLEVELAND HIGH SCHOOLS[9]

Chart 14 on page 137 shows the per cent of pupils in the freshman class of each high school who came from the high third, the middle third, or the low third of their eighth grade classes. The portion in outline indicates the high third, the shaded portion indicates the middle third, and the black indicates the low third.

In the *Vocational Education Magazine*, vol. ii, No. 3, Nov., 1923, page 178 ff., J. H. Hinds presents the results of an investigation made in the schools of Texas. The tables on page 138 were adapted from more detailed tables presented in the article referred to:

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[8] BOOK, WM. F., *Intelligence of High School Seniors in Indiana*, The Macmillan Company, New York, 1922. Adapted from Table XXI, p. 146.

[9] JUDD, C. H., "Measuring the Work of the Public Schools," *Cleveland Education Survey*, Russell Sage Foundation, New York, 1916, p. 191.

CHART 14

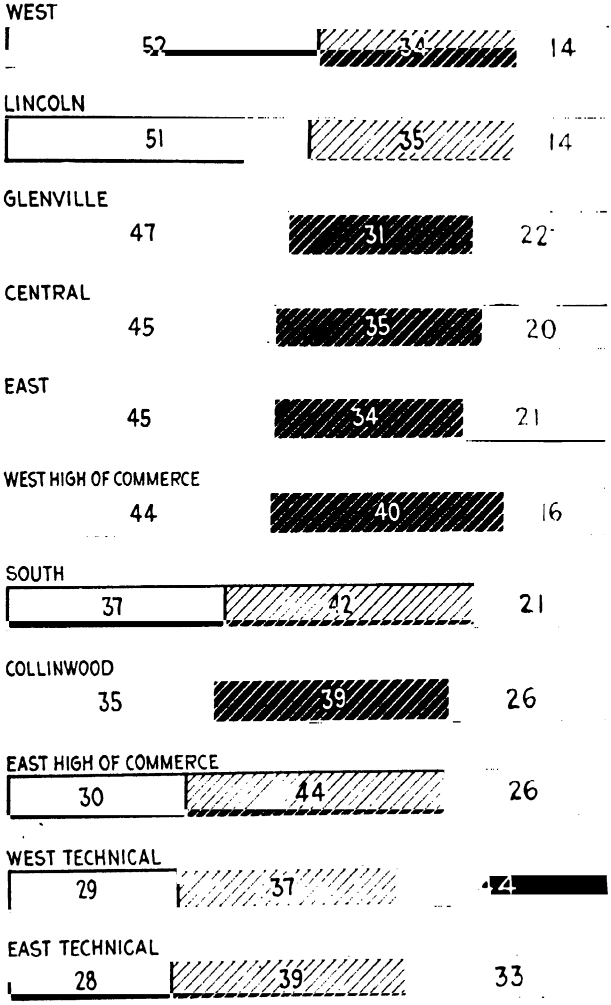
WEST
52
34
14
LINCOLN
51
35
14
GLENVILLE
47
31
22
CENTRAL
45
35
20
EAST
45
34
21
WEST HIGH OF COMMERCE
44
40
16
SOUTH
37
42
21
COLLINWOOD
35
39
26
EAST HIGH OF COMMERCE
30
44
26
WEST TECHNICAL
29
37
34
EAST TECHNICAL
28
39
33

TABLE XIV.—MEDIAN OTIS INDICES OF BRIGHTNESS IN VOCATIONAL AND NON-VOCATIONAL GROUPS

| Group classification | Median I.B |
|---|---|
| Group electing vocational subjects | 94.09 |
| Group electing non-vocational subjects | 98.07 |

TABLE XV.—MEDIAN OTIS INDICES OF BRIGHTNESS BY SUBJECT ELECTED

| Group classification | Median I.B |
|---|---|
| Group electing Latin | 104.6 |
| Group electing Spanish | 97.5 |
| Group electing Home Economics | 97.0 |
| Group electing Mathematics | 95.11 |
| Group electing Agriculture | 93.33 |

TABLE XVI.—MEDIAN INDICES OF BRIGHTNESS BY TYPE OF HIGH SCHOOL

| Type of school | Median I.B |
|---|---|
| City high school | 100.5 |
| Affilated town schools | 98.0 |
| Unaffiliated small-town schools | 84.4 |
| Rural schools | 77.0 |

TABLE XVII.—MEDIAN INDICES OF BRIGHTNESS BY OCCUPATION OF FATHERS

| Occupation group of father | Median I.B |
|---|---|
| Professional | 120.0 |
| Business men | 99.0 |
| Skilled trades | 97.5 |
| Clerical | 95.91 |
| Ranching | 91.0 |
| Farming | 87.4 |
| Personal | 85.0 |
| Common labor | 77.08 |
| Others | 105.0 |

The following is taken from *The Boston Herald*, Boston, Massachusetts, February 28, 1923:

> HALF HIGH SCHOOL SENIORS POOR COLLEGE MATERIAL
>
> Legislative Commission Reports on Results of Psychological Examinations given 3,333 pupils.
>
> Intelligence tests given to 3,333 pupils in the senior classes of Massachusetts public high schools during the present school year reveal the fact that 40 per cent of the boys and nearly 60 per cent of the girls are poor college material, according to data compiled by the Special Commission on High Education appointed by Governor Cox.
>
> In the survey it was found that the psychological ratings of the girls were consistently lower than those of the boys. For the two sexes combined, the tests indicated that more than 50 per cent are not suitable college material.
>
> The Brown University psychological examination was employed as the instrument for the mental survey. . . . The standards of an academic college, of which Brown University is a type, were taken as a measure of suitable college material for the purposes of the tests.

**3. The Continuation Schools.**—Possibly the next most important strategic point is the *part-time schools and classes, more commonly known as the continuation schools.* Here we have a group of students who have left school, we regret to say, with considerable eagerness, have gone out into the work-a-day world, and are going through experiences, some of which are quite hard and bitter. Some of the older pupils are beginning to realize the value of further schooling. Some of them enter the continuation schools with a feeling of resentment. It is not our purpose here to enter into a discussion of what should be the offerings of a continuation school, except to say that they should attempt to satisfy *the ascertained needs* of the group they are serving.[10] At least one-half of the time should be spent in practical work, and the other part of the time on subjects that are specifically related to life and the needs of the community and the individual. In the diversified offerings of a real continuation school, the vocational adviser will find the machinery for considerable real guidance, for try-out courses, and for the discovery and the development of interests, aptitudes, capacities, and the life-career motive.

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[10] See PAYNE, A. F., *Administration of Vocational Education*, McGraw-Hill Book Company, Inc., New York, 1924, chap. xii, "Part-time Schools and Classes."

*Dr. Hopkins presents the following results of an investigation of 1,200 continuation school pupils located in five cities and towns.*[11]

TABLE XVIII.—THE INTELLIGENCE OF CONTINUATION SCHOOL PUPILS

| | Median score | Median I.Q. |
|---|---|---|
| Regular school 14 years old | 124.71 | 102 |
| Continuation school 14 years old | 89.64 | 85 |
| Regular school 15 years old | 129.32 | 104 |
| Continuation school 15 years old | 92.87 | 87 |

TABLE XIX.—ACCELERATION AND RETARDATION IN THE CONTINUATION SCHOOL, JOHNSTOWN, PENNSYLVANIA, 1919[12]

| | Number of students |
|---|---|
| Two years above grade | 2 |
| One year above grade | 3 |
| Normal | 35 |
| One year below grade | 103 |
| Two years below grade | 121 |
| Three years below grade | 56 |
| Four years below grade | 11 |
| Total | 331 |

NOTE.—291 retarded one or more years.

**4. Every continuation school should have a "reservoir" or "entry class"** into which all new students are placed. The work of this class should consist primarily of making a complete survey of the students' abilities, achievements, capacities, and possibilities. On the basis of *these ascertained facts* the students should be advised and guided into certain classes and courses. After they have been in the continuation school for quite some time and have developed certain abilities or have acquired certain skills, then should come the problem of replacing them and making adjustments either in their school work, in their employment, or, as is necessary in many cases, in the home conditions.

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[11] HOPKINS, L. T., *The Intelligence of Continuation-school Children in Massachusetts*, Harvard University Press, Cambridge, Mass., 1924.

[12] PAYNE, ARTHUR F., *Administration of Vocational Education*, McGraw-Hill Book Company, Inc., New York, 1924, p. 238.

**5. The junior high school,** especially in the first year, is another decided strategic point for guidance. The "Pittsburgh plan" of organization of junior high schools recognizes the importance of the guidance work in this first year of the junior high school.

Too much importance or value should not be attributed to the shop experiences as organized at present in the junior high school. We know little about their values; no scientific research has been done in regard to them. In any case the guidance or "try-out" values are largely negative as organized at present, and it is probable that the future will show that the positive guidance in junior high school will be found to be along the line of levels of intelligence and ability or inability to do the regular classroom work. This entire field of try-out courses in the junior high school and guidance is one about which we assume a great deal, but know very little.

**6. Special and Misfits.**—There will be sifted out of the entire school population a group of students who will be constantly coming to the vocational adviser for readjustment. This group will be made up largely of special cases and misfits, who have been unable, for any one of many reasons, to fit into the conditions of the regular classroom work.

In many cases it will be merely a lack of the intelligence required to do the school work. If this is true of a child from a poor family, the remedy is generally applied by the parents. They take the child out of school, and he or she is thrown into business or industrial life, is allowed to make his or her own adjustments, and find his or her own level. With well-to-do parents, the situation is quite different. They are quite earnest in their desire to keep their child in school. They not only want him to stay in school, but also to keep up with the regular classes and it is only after repeated failures on the part of the student that the parents are willing to consider any change in school, course, or type of work, which the guidance counselor may advise.

A small percentage of these special referred cases will be pathological cases. Some of them will be in the beginning stages of *dementia praecox*. Some of them will have certain inherited defects or taints, such as perversions, psychoses, neuroses, epilepsy, etc., which make it hopeless for them to attempt to stay in school and keep up with the work of the regular courses.[13]

Each case calls for individual treatment at the hands of the vocational guidance adviser, with probable reference to a psychiatrist or assignment to special classes for further study and possible ultimate assignment to an institution.

Under the auspices of the National Committee for Mental Hygiene, a survey was recently made in the public schools of Wyoming. Of the 3,885 public school children included in this study, 94 per cent were native-born, but more than one-fourth of the parents were foreign-born. In comparing their mental age with their actual age, it was found that 11 per cent were retarded more than two years, and 35 per cent were retarded one or two years. At the state industrial institute there were 75 boys from 11 to 25 years of age, and of these 50 presented psychiatric problems. Forty-one had psychopathic personalities four were border-line defectives, three were mental defectives, one had a psychoneurosis, and one endocrine imbalance.

**7. Cooperative Courses.**—Other strategic points of minor importance are the freshmen in high schools wherever there is a cooperative industrial or commercial high school course. Generally, the first and sometimes the second years of this high school cooperative course are spent wholly in the school. Then the question comes up as to the vocation in which these students should cooperate.

**8. Eighth-grade Graduates.**—Another group is composed of the eighth-grade graduates. Some of these are going into the high school. Others are not going into the high school but are going right to work. Still others are going to private schools, such as automotive schools, private trade schools, and business schools. In the groups that are going to high schools, the problem arises as to which high school they should enter and which course they should choose. Some are headed for college, and they need advice and guidance upon the subjects they should take in order to meet the requirements for college entrance. (See page 151 ff.)

**9. College Freshmen.**—Still another group is composed of the college freshmen. We have exactly the same problem with college freshmen as with high school freshmen, with, of course, a difference with regard to levels of intelligence, the college freshman being a more highly selected and specialized group:

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[13] See chap. XX.

Many of our large universities are realizing the need for guidance particularly during the freshman year and are making surveys and proposals to establish a *common university or freshman year*, in which it is assumed that the student will lay a general foundation for the more specialized work of the last three years, and discover and orient himself in regard to the work of the university and the more specialized courses of the professional schools which are given in the later years. It is probable that the next few years will show a great increase in the activity of the university administrators along this particular line, with a corresponding opportunity for scientific guidance.

**10. The evening schools and classes** offer only slight opportunities for guidance. In the trade extension (Smith-Hughes) classes there is practically no necessity for it. The students have presumably chosen their occupation, are working at it, and are in evening classes to obtain related knowledge and further skill that will enable them to attain promotion and advancement in their chosen vocation. In the trade preparatory (Non-Smith Hughes) classes it may be assumed that the students have chosen their vocations, but in many cases it will be found that they have chosen them largely by chance and without any systematic or scientific advice. It would probably be best in the evening school merely to offer the services of a vocational adviser to those who desire them rather than to make them a part of a prescribed system.

In all of this work, it should be kept in mind that it is the function of the director of vocational guidance to organize a system of tests, records, forms, and questionnaires, that will act as series of sieves for the purpose of segregating students into homogeneous case groups. Only the special cases who fail to pass through these sieves and fail to fit into any regular group will come up for special individual treatment.

It is a fact that about one-half of our school population need no *special* guidance either in school or at any other time. They are normal in intelligence, their environment is favorable, they do their work in school, and their parents are able to and do finance them and make it possible for them to progress along the most suitable lines. Of the other approximate 50 per cent, at least 40 per cent will automatically be brought to the notice of the adviser by the system which has been established, and in a personal interview of a few minutes a change of course is recommended, put into force, and the individual is started along the new road indicated. It is only with the remaining approximate 10 per cent that the vocational adviser needs to do any great amount of individual work, or serious study. They are the exceptional people, the failures, the misfits, the perverts, the psychopathic cases, the incorrigibles, etc. It will, of course, be recognized that these percentages will vary considerably according to the type of school and community and the degree of selection that has already taken place with the student group.

## CASE PROBLEM

### GUIDANCE IN VARIOUS SCHOOL UNITS

Assume that the superintendent under whom you are to work next year has written you a letter stating that he has recently become impressed with the importance of vocational guidance. In this letter he asks you what proposals you have to offer regarding guidance in the following units of his school system:

1. The Junior College.
2. The Latin High School.
3. The Central High School (composite).
4. The Commercial High School.
5. The Junior High School.
6. The All-day Unit Trade School.
7. The Prevocational (Intermediate) School.
8. The Opportunity School.
9. The Elementary Grades.
10. The Americanization Classes.
11. The Academic Evening Schools.
12. The Smith-Hughes Vocational Evening Classes.
13. The Non-Smith-Hughes Vcaational Evening Classes.
14. The Special Classes.

Present an outline of a letter to the superintendent, indicating the degree and special phases of guidance you would recommend for each of these 14 school units.

## CASE PROBLEM

### ESTABLISHING A GUIDANCE SYSTEM IN A KANSAS HIGH SCHOOL

In page 621 of *Educational Sociology*, SNEDDEN, DAVID, The Century Company, New York, 1922, 689 pp., the following case is presented:

"In a prosperous farming (and related commercial) area in eastern Kansas is a high school of 200 pupils. The principal has been given $600 yearly to provide for vocational guidance. Nearly half the pupils will graduate, and half of these will go to normal schools and agricultural colleges. Many of the boys want to follow farming, but all the girls aspire to urban work and permanent residence."

### Questions

Give this principal advice as to how to proceed.

1. What further data should you have before you can give complete advice to the principal?
2. Draw a diagram indicating the method of analyzing the leaving group into case groups.
3. Do the same for the graduating group.
4. On what factual bases will you make the above analysis and segregation?
5. What part will the following tests play in your proposed plan?
   (*a*) Intelligence tests.
   (*b*) Achievement tests.
   (*c*) Prognosis tests.
   (*d*) Aptitude tests.
   (*e*) Vocational tests.
6. What personnel will be required to carry out your plan? What limit has been set?
7. About what percentage of these students will need *careful individual* analysis and guidance?
8. What cooperating agencies would you include as part of your plan?

## CASE PROBLEM

### ESTABLISHING A GUIDANCE SYSTEM IN A MASSACHUSETTS JUNIOR HIGH SCHOOL

On pages 620–621 of *Educational Sociology*, SNEDDEN, DAVID, The Century Company, New York, 1922, 689 pp., the following case is given:

The Junior high school of N, in Massachusetts, has 1,200 seventh and eighth-grade pupils, besides 200 retarded boys and girls over 12 and under 16. The community is mostly suburban. About 400 of the pupils come from homes that will not oppose their leaving school as soon as the law allows; and about 800 from families very ambitious to have their children finish high school. The school offers generous and flexible programs of manual training and household arts, a slight amount of gardening, and no commercial work. All pupils leaving school after 14 must get working papers, involving a physical examination, and capable of involving such other examinations as may be desired.

"The school authorities have been convinced that vocational guidance is desirable, and have appropriated $2,600 annually to this purpose (but with stipulation that not more than $2,000 shall be spent on salaries). But they have as yet no program, and have asked the superintendent to make recommendations. He asks you to submit yours. Especially does he want to know: (*a*) Should one full-time guidance teacher be employed, or a man for the boys and a woman for the girls? (*b*) Should proposed work be chiefly informative and inspirational, or diagnostic and placement? (*c*) Should any of it be obligatory on (1) all pupils, or (2) pupils applying for working papers, or (3) should it be elective? (*d*) Should time be given it in the regular schedules of studies? Where? How much? For whom?

(*e*) Is it desirable that the guidance teacher or teachers should influence aims or other studies? (*f*) What should be the specific character of offerings (consider regular instruction, guided readings, individual advising, class visits to mills, lectures by teachers, etc.)?"

### Questions

1. What is meant by informative guidance? Give samples that might be suitable in this situation.
2. The same for inspirational.
3. The same for diagnostic.
4. The same for placement.
5. What qualifications would you demand of the adviser or advisers? Make a list of institutions that definitely train such advisers.
6. Should it be obligatory on the student to take and to follow the advice or any part of it.
7. What other data is needed before a complete reply can be made?
8. Write a statement for the superintendent dividing it into two parts (1) recommendations, (2) questions calling for further data.

## CASE PROBLEM

### GUIDANCE IN A UNIVERSITY

Assume that you are being considered for the position of Assistant Dean of Men or Women or Assistant Registrar or Vocational Adviser in a university. The President informs you that next year they are planning to have all freshmen follow the same course of study, which is entitled "The University Freshmen Curriculum." All freshmen are to be registered as university freshmen—not as freshmen in the Law School, Engineering College, College of Education, College of Dentistry, Agriculture College, etc., the idea being that during this first year the freshmen will have opportunities to orient themselves and be measured by certain common standards.

The President feels that there are great possibilities for guidance during this freshman year and asks that you outline a plan of diagnostic, informative, educational, and vocational guidance, with the idea that these freshmen will be enabled to discover themselves and make wiser choices of professional schools which they will enter in the sophomore year.

Present a brief outline of such a plan with a dated schedule.

## CASE PROBLEM

### GUIDANCE IN THE JUNIOR HIGH SCHOOL

The G. Junior High School at J., Pennsylvania, has about 450 seventh-, eighth-, and ninth-grade students. J. is predominantly a steel-making and coal-mining town. Nearly one-half of the entire grammar school population is retarded more than one year. About one-half of the student body of the Junior High School is of foreign-born parentage of southern European stock.

The school is well organized, has a commercial department, household arts, wood-working, electrical, machine, tinsmithing, and plumbing shops, and also has an art department, an orchestra, glee club, a school garden, and cooking and sewing departments.

The principal has been given one-half of the time of one teacher (salary $1,600) for the guidance work. This teacher has not been trained in vocational guidance but is enthusiastic about guidance and willing to learn. The principal has from April to September to prepare for the new work.

Draw up a detailed sequential plan for the approval of the principal, covering such points as (*a*) Surveys: Of what? (*b*) Tests: Of what; State specifically what kind and where obtained; where to be given. (*c*) Occupational information: Who gives it? Where obtained? How obtained? How given? (*d*) Shall the vocational advisor also do educational guidance? (*e*) What authority shall the vocational adviser have in regard to the issuance of employment certificates? (*f*) Shall there be any medical examination? Who will give it? (*g*) Shall all phases of this guidance service be prescribed for all students? For some? Some phases prescribed some elective? (*h*) How much latitude shall the vocational adviser have in regard to suggesting changes in course objectives and methods? (*i*) What about try-out courses? For boys? For girls? For those going on to Senior High School? For those not going on to Senior High School? (*j*) Should this vocational adviser be a man or a woman? Would it be best to have a man for the boys and a woman for the girls; or either one for both boys and girls? (*k*) What have you to suggest as a training program for this adviser? (*l*) What methods of checking the results of the guidance do you recommend? (*m*) What cooperative relationship should be established by the vocational advisor? What elements of cooperation should be guarded against? (*n*) What would you suggest be done for exceptionally dull and exceptionally bright students in poor financial circumstances? (*o*) What have you to suggest about record forms, blanks, and filing systems?

## CASE PROBLEM

TABLE XX.—OCCUPATIONS OF ST. LOUIS CONTINUATION SCHOOL PUPILS

Miss Alma Fletcher furnishes the following list of jobs in which the continuation school pupils of St. Louis have been placed during the year 1923–24.

BOYS

Apprentice gardeners
Apprentice glass blowers
Assemblers
Assistants to cutters
Belt boys
Block boys
Stocking boarders
Nutters
Nailers
Box score boys
Bucket ringers
Bundle boys
Cutters
Delivery boys
Dye-out boys

GIRLS

Assemblers
Back shoe girls
Basket bottomers
Box cleaners
Box lacers
Box makers
Branchers
Bus girls
Buttoners
Card cleaners
Cashiers
Cementers
Check girls
Circular workers
Feather workers

Table XX.—(*Continued*)

| Boys | Girls |
|---|---|
| Elbow riveters | Fillers |
| Errand boys | Floor girls |
| Factory clerks | Flower makers |
| Fillers | Folders |
| Floor boys | Glove boxers |
| Folders | Glue girls |
| Form boys | Labelers |
| Fur nailers | Markers |
| Glove makers | Millinery apprentices |
| Labelers | Nurse girls |
| Lid adjusters | Office girls |
| Mail boys | Packers |
| Messengers | Pasters |
| Office boys | Clippers |
| Order chasers | Doffers |
| Packers | Draw-in girls |
| Press washers | Errand girls |
| Preserver's helpers | Examiners |
| Printer's devils | Facers |
| Sanders | Pressers |
| Salt scalers | Ribboners |
| Solderers | Stampers |
| Stemmers | Stock girls |
| Stock boys | Table workers |
| Telephone boys | Typists |
| Thermometer bakers | Window trimmers' helpers |
| Thermometer finishers | Wrappers |
| Woodwork apprentices | |
| Wire benders | |
| Wrappers | |

## Questions

1. The students were "placed" in these jobs. Does that mean that they were guided? What is the difference?

2. What is the common element in the large percentage of these jobs?

3. How might these jobs be used as a part of a real guidance system?

4. Check those jobs in the lists at which (*a*) you have worked; (*b*) in which you have seen others work; (*c*) which you have made a study of; (*d*) those which carry names that mean something to you; (*e*) those which carry names that mean nothing to you.

5. In the list of jobs, check those leading to higher occupations utilizing experience gained.

6. List the occupations requiring digital dexterity. At what ages is digital dexterity at its peak?

7. Give the occupational description of the jobs listed.

8. Give a description of the workers or requirements of the workers for these jobs.

9. What would be the lines of promotion in these jobs?

10. On which jobs would you put boys and girls of low I.Q.?

11. Which jobs are unsuited to pupils with weak stomachs? Weak eyes? Poor hearing? Poor coordination? Slow reactions? Flat feet? Tuberculosis? Rheumatism? Cardiac trouble? Psychoses? Epilepsy?

12. List the seasonal jobs. How can seasonal jobs be handled so that pupils have steady work?

13. At which jobs would you place those pupils good or poor in arithmetic? Spelling? Drawing? Geography? Shop work? English?

14. Knowing so little about these jobs and the pupils, how can you be sure that you are bringing together "the right person and the right job?"

15. What is the one important thing that can be done that would be of value to these students while working at these jobs?

## CASE PROBLEM

### GUIDANCE IN THE Y. M. C. A.

In M, a large city in the Middle West, there is a fine Y. M. C. A. building and organization. For several years they have successfully managed a placement bureau that is nearly self-supported by the fees charged.

As the personnel of the placement bureau has changed from time to time, they have had sporadic pseudo-guidance of the character-analysis type. Those in authority have recently become skeptical about this type of guidance and desire to standardize their practice along the newer and more scientific lines.

Their clientele is quite largely young men of from 20 to 30 years of age who feel that they are not making a success of their lines and desire analysis, advice, and replacement where there are more possibilities of making a personal success.

A philanthropic business man has donated $500 and expenses for the services for one month of a person to organize a guidance system along the most scientific lines. It must be closely correlated to the present placement system and the present placement officer must be trained to take over the work at the end of the organization period.

If you were chosen to do this work how would you spend the month?

Draw up a detailed outline of a plan you might submit.

## CASE PROBLEM

### TRAINING ADVISERS FOR Y. M. C. A. SERVICE

Your plan submitted in response to the case problem "Guidance in the Y. M. C. A." has been so satisfactory that you have been asked to organize and conduct a two weeks' training course for 50 Y. M. C. A. personnel officers. You have full control of their time for four hours per day of class work and four hours per day of assigned work.

Assume that these men know nothing of the new scientific methods, but that many of them still hold to at least a partial belief in the old character analysis methods. Outline a plan, program, and schedule for such a training course.

## CHAPTER XI

# VOCATIONAL GUIDANCE IN THE VARIOUS SCHOOL UNITS

In general, it will be necessary for the organizer and the administrator of a guidance system to think of this organization work in terms of the established units of the school system, such as the elementary schools—particularly the sixth, seventh, and eighth grades—the junior, intermediate, or prevocational schools, the senior high schools, the four types of part-time schools, the vocational schools, the evening schools; and, finally, its relation to guidance in the colleges, professional schools, and universities.

## I. VOCATIONAL GUIDANCE IN THE ELEMENTARY SCHOOLS

Vocational guidance in the elementary school classes is limited quite largely to the sixth-, seventh-, and eighth-year classes, and occasionally to the fourth- and fifth-year classes. By "guidance" in these classes is meant that type of guidance which is scientific, systematic, and definite, and which has a specific objective, and *not the general sentimental, aspirational, or emotional, type of so-called guidance that is supposed to be performed in some vague and ambiguous fashion in all elementary school work and by all of the teachers at any and all times, by which all students are supposed to be inspired to aspire.*

### A Survey of the 13-year-old Students

If the leaving-school age is 14, it is always well to make a survey at least twice a year of *all students who have attained their thirteenth birthdays.* The majority of these will naturally be found in the sixth, seventh, and eighth grades.[1] These students should be segregated into homogeneous case groups for the purpose of guidance.[2] Those who are headed for eighth-grade graduation and high school entrance may be considered as being safe for the time being and left for later consideration.

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[1] Ayres, Leonard P., *Some Conditions Affecting Problems of Industrial Education in Seventy-eight American School Systems,* Russell Sage Foundation, New York, 1916.

[2] See chap. X.

Our chief and immediate concern is with those students who have definitely decided to leave school as soon as the law allows. Some, but not all, of these students would naturally, as a result of the guidance system, be advised to remain in school for the attainment of a specific objective.

They should not only be advised but should be presented with convincing evidence of the advantages of following this advice. *The procedure of guiding young people must always be a self-selling proposition.* They should always know the purpose of the work, the records, the tests, be fully acquainted with the results (except in cases of low I.Q.), and be carried right along with the adviser in arriving at a mutual conclusion that will be acceptable to all parties concerned.

1. Of this 13-*year-old group*, the only members who might possibly be taken out of their grades or classes are those who have decided to leave school and who should leave school because they have reached the limit of their ability to derive benefit and and make progress in the courses and curricula already existing in that school or school system.

In many cases, these students should be physically segregated into a special class with a special course of study. They should be definitely and positively prepared to make an effective entrance into the economic world. An earnest attempt should be made to give them some marketable skill, to protect them from exploitation as common labor.

They should be definitely acquainted with the conditions of work and service which actually exist in that community. While doing this, emphasis should be laid upon the development of citizenship, standards, service ideals, and right attitudes. The administrator organizing such a course and the teachers teaching it should be thoroughly imbued with the great responsibility involved in preparing this particular case group of students to take their places effectively in the economic world.

2. Another case group of major importance in the elementary schools is *that group which is almost certainly headed toward graduation from the eighth grade and entrance to the high school.* The rapid and disproportionate elimination from our high schools during the freshman year, particularly the first semester, is a matter of serious concern. It is quite probable that some of

*this loss could be avoided by proper guidance work during the seventh and eighth grades of the elementary schools. It is* probable that many of these students should never have entered high school.

### CAMPAIGNING FOR HIGH SCHOOL STUDENTS

Quite generally throughout the country the only guidance between the elementary schools and the high schools consists merely of an intensive selling campaign by the principals of the various high schools, or persons delegated by them, who visit these eighth-grade graduating classes and by all means in their power try to persuade the students to go not to high school, but to their own particular high school. The prime purpose is to increase the enrolment of their own high schools. In many cases they over-sell their proposition, and they fail "to deliver the goods" when these students get to their high schools. It is a campaign for students that is illogical, unscientific, and that produces bad results. The impetus for students to go to high schools should be the other way around. The students should be analyzed; the offerings of the high schools should be analyzed and charted; the stated, probable, and possible educational and vocational objectives of these eighth-grade graduates should be carefully studied; and then they should be advised to go not only to high school, but to a particular high school, and to some particular course in that high school. Contacts should be established for them with some particular teacher or person—all for good and sufficient reasons with which the pupil is well acquainted and to which he or she agrees.

3. *The third group* is made up of those who will graduate from the eighth grade but who do not intend to go on to high school, but do intend to go to some other more specific-purpose school outside of the public schools—such as the so-called business colleges—for more specific and intensive training than the public schools offer. Too many times these students are treated in a shabby fashion because they have made their decisions and have announced their purpose of going to a private school for intensive training.

Many times it is forgotten that these students have a right to make exactly that decision if they so desire, and, furthermore, by exercising that right they do not thereby forfeit their rights to any service that the public school may be able to offer them.

Even after these students have severed their connections with the public schools and have entered upon the courses of training in these private schools, they still have a right to advice and assistance from the public schools, although this right generally is neither recognized, admitted, nor exercised.

4. Another group of less importance is that *group composed largely of girls* who intend to graduate from the eighth grade, but who intend to discontinue their education and do not intend to enter employment, but expect to stay at home for a wide variety of reasons, the most commonly advanced one being "to help mother," although this may be far from the real reason. Many times these students have not been working to their full capacities. They need a stimulus. They have possibly had an easy time at home, have been petted and spoiled, have acquired a distaste for school work and study, and their families feel that they are on too high a social standard to allow them to go to work, and so the easiest way out of the situation is for them simply to stay at home after they graduate from the eighth grade.

These pupils are in the middle of their adolescent period, and are susceptible to the idealistic type of appeal—appeal to their vanity, their self-respect, and the workings of the life-career motive. This group should further be analyzed into case groups of those who are capable of entering and maintaining themselves in a general or special high school, and those who are not capable of doing so, and they should be advised accordingly.

## THE RECORD SYSTEM

During the sixth, seventh, and eighth grades, it is essential to the proper functioning of a guidance system that a thorough-going system of records be kept concerning all possible phases of the life of each student.[3] This record should cover all phases of the student's academic life, going as far back as possible, and should be filled in accurately and in detail for the last three grades of the elementary school. If the student has not been given a thorough physical examination, one should be given at this time. All physical defects should be noted and remedies suggested. Particular care should be taken to note chronic defects or weaknesses that might materially influence the success or non-success of this individual in certain occupations. The family history should be recorded. The environment and the social history of the child and the family should also be recorded. A series of tests, consisting of one or more intelligence tests, standardized achievement tests in all subjects, aptitude, vocational and prognosis tests should be given, the results recorded, and interpreted, conclusions drawn, recommendations made, and adjustments in schedules, programs, and courses of study made on the basis of these conclusions. This cumulative record should be carefully filed and kept up-to-date so that it will always be available for inspection whenever necessary.

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[3] See *Manual of Instruction; Physical and Academic Records of Pupils in the Elementary Schools*, Cincinnati Public Schools, Cincinnati, Ohio, 1919. Also RALPH, G. A., *Elements of Record Keeping for Child-helping Organizations*, Russell Sage Foundation, New York, 1915. Also *Report of the Committee of the National Education Association on Uniform Records and Reports*, U. S. Bureau of Education School No. 471, Washington, D. C., 1912. Also EATON, J. S., *Record Forms for Vocational Schools*, The World Book Company, Yonkers, N. Y., 1917.

## II. VOCATIONAL GUIDANCE IN THE JUNIOR HIGH SCHOOLS[4]

One of the outstanding features of any statement of the aims and purposes of the junior high school is that it proposes to retain a larger proportion of its student body than has heretofore been considered possible. It proposes to do this by the recognition of individual differences, by making distinctive offerings and adjustments in its course of study that will take advantage of, and afford opportunity for, the exercise of those individual differences.

We find also that the junior high school is a school which is supposed to offer diversified experiences for self-discovery, for the discovery of capacities, aptitudes, and abilities, and for explorations in a variety of fields. This particular type of school also claims that its curricula are organized on the basis of the recognition of the fact that a large proportion of its students are adolescents. All of this means guidance, not only vocational guidance, but educational guidance, physical, civic, social, and moral guidance.[5] In fact, the curricula and all the extra-classroom activities of the junior high school should be regarded as little more than guidance in its widest aspects.

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[4] Van Denburg, J. K., *The Junior High School Idea*, Henry Holt and Company, New York, 1922. Davis, C. O., *Junior High School Education*, The World Book Company, Yonkers, N. Y., 1924. Koos, Leonard, *The Junior High School*, Harcourt Brace & Company, New York, 1920. Briggs, T. H., *The Junior High School*, Houghton Mifflin Company, New York, 1920. Thomas-Tindal, E. V. and Myers, J. D., *Junior High School Life*, The Macmillan Company, New York, 1924. Hines, H. C., *Junior High School Curricula*, The Macmillan Company, New York, 1924.

A well-organized junior high school, to fulfil the special purposes of such a school, should have at least four curricula offerings:

1. The straight academic course.
2. The household arts course.
3. The industrial arts course.
4. The commercial arts course.

These should not be strictly prescribed courses, but should be made up of required constants, with electives as variables.

The selection of these courses, with their variable electives, constitutes in itself a real guidance problem. In addition, there is the wide range of extra-classroom activities which are a vital part of every well-organized junior high school. The guidance system should take note of, and, if at all possible, actually advise concerning the students' participation in these extra-classroom activities.

## A List of Extra-classroom Activities

The following list of 128 extra-classroom activities in the high schools of New York City and the classified list in the Junior High School of Bayonne, New Jersey, will indicate the guidance possibilities of this field of work.

Table XXI.—A Partial List of Extra-classroom Activities in the High Schools of New York City[6]

1. Academeia
2. Accountancy Club
3. Afternoon Help Classes
4. Alaeris Debating Club
5. Alumni Association
6. Arista
7. Art Club
8. Athletic Organizations
9. Audubon Club
10. Band
11. Baylis Squad
12. Bibliophile Club
13. Bicycle Club
14. Book Room Club
15. Boosters' Club
16. Boxing Club
17. Camera Club
18. Cantata Club
19. Cavalry
20. Chess Club
21. Chess and Checker Club
22. Chemistry Club
23. Choral Club
24. Civic Squad
25. Classica Sodalitas
26. Class Officers' Association
27. Class Officers' Reserve
28. Club Español

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[5] Davis, J. B., *Vocational and Moral Guidance*, Ginn and Company, New York, 1914.

[6] For assistance in compiling this list the author has to thank Miss M. E. Alderton, a student in one of his classes.

TABLE XXI.—*(Continued)*

29. Commerce Art Service
30. Commercial Bank
31. Congress Literary
32. Cross Country
33. Current Events Club
34. Dancing Classes
35. Debating Society
36. Der Deutsche Verein
37. Dramatics
38. Drawing Teams
39. Economics Club
40. Employment Bureau
41. Essay Club
42. Fairley Literary Society
43. First Aid Club
44. Foreign Language Society
45. Franklin Literary Society
46. Garrick Society
47. General Organization Store
48. Girls' Craft Club
49. Girls' Rifle Club
50. Glee Club
51. Government Organization Store
52. Grade Dances
53. Gregg Speed Club
54. Guernsey Squad
55. "Gym" club
56. Hamilton Literary Society
57. Hellenic Club
58. High School Chorus
59. History Club
60. Hockey
61. Honor League
62. Interform Athletics
63. John Burroughs Club
64. Junior Debating (Boys)
65. Kearney's Kamera Kids
66. Latin Club
67. Lampa Dari
68. Lost and Found Bureau
69. Lunch Room
70. Library
71. Late and Absence Squad
72. Lacrosse
73. Law Forum
74. Law Society
75. Le Cercle Français
76. Literary Club
77. Mandolin Club
78. Marshals' Club
80. Motion Picture Squad
81. Movie and Stage Squad
82. Multigraph Squad
83. Music Club
84. Music Organizations
85. Musical Arts Society
86. Naturalists' Club
87. Nature Study Club
88. Newspaper and Periodical Work
89. Orchestra
90. Pasteur Medical Society
91. Philatelic Society
92. Philatelists' Club
93. Playgoers' Club
94. Poster Club
95. Press Club
96. Printing Squad
97. Psychology Club
98. Publications
99. Qui Vivi Literary Society
100. Quill and Brush Club
101. Radio Club
102. Rifle Club
103. Roosevelt Memorial Association
104. Savings Bank
105. School Art League
106. School Spirit Club
107. Science Club
108. Scribbles
109. Scribes
110. Senior Debating Club (boys)
111. Senior Shorthand Club
112. Service Club
113. Sketch Club
114. Social Current Club
115. Society of the Other Person (manners)
116. Spanish Club
117. Spanish Stamp Club
118. Stenography Club
119. Student Welfare Committee
120. Supply Club
121. Swimming Club
122. Tourist Club
123. Traffic Squad
124. Varsity Show
125. Walking Club
126. Women's Life Saving Corps
127. Xila Club

TABLE XXII.—A LIST OF EXTRA-CLASSROOM ACTIVITIES IN THE JUNIOR HIGH SCHOOL, BAYONNE, NEW JERSEY

*Health:*
- First Aid Club
- Red Cross Club
- Traffic Club
- Boy Scouts
- Girl Scouts
- Rowing Club
- Swimming Club
- Tennis Club
- Quoit Club
- Hiking Club
- Campfire Girls

*English:*
- Short Story
- Public Speaking
- Journalists
- Dramatic Club
- Library Club
- Books and Authors
- Joyce Kilmer Club
- Debating Club
- Parliamentary Law

*Commercial:*
- Bankers' Club
- Typists' Club
- Thrift Club
- Captains of Industry
- Board of Trade
- Advisers' Club

*Fine Arts:*
- Chorus
- Orchestra
- Boys' Glee Club
- Girls' Glee Club
- Band
- Music Appreciation Club
- Cartoonists' Club
- Illustrators' Club
- Camera Club
- Pottery Club

*Industrial Arts:*
- Trouble Shooters
- The Type Setters
- Electricity Club
- T. Squares
- Toy Makers
- Basketry Club
- Needle and Thread
- Bench and Lathe
- Woodcraft Club

*Domestic Arts:*
- Home Nursing
- Home Beautiful
- Home Makers
- Chefs
- Millinery Club
- Fashion Plates
- Clara Barton Club

*Science:*
- Radio Club
- Wireless Club
- Aeroplane Club
- Bird Club

*Social Science:*
- Embroidery Club
- Around the World
- Scrap Book Club
- Who's Who Club
- Know Your City
- Know Your Country
- Life Career Club

The extra-classroom activities of the Bayonne Junior High School are definitely classified under school departments and the titles of those in the New York list are in most cases indicative of certain school departments. This raises the whole question of classification of these activities and whether or not this classification should not be extended, whether we should not have a different classification on the basis of try-out and guidance values, and whether or not these extra-classroom activities should not be made more purposeful.

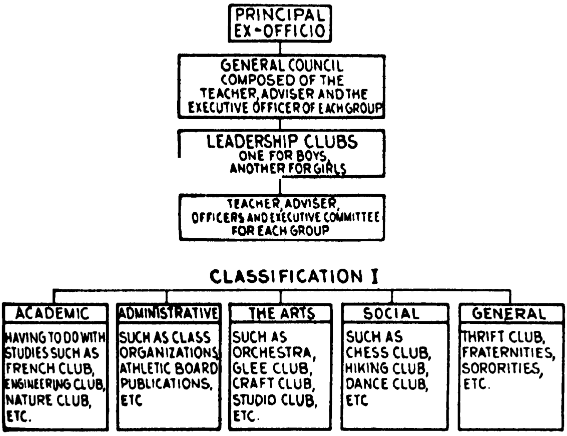
The following case problem is presented for the purpose of developing the possibilities of these extra-classroom activities.

### CASE PROBLEM

#### ORGANIZATION OF EXTRA-CURRICULA ACTIVITIES FOR GUIDANCE PURPOSES

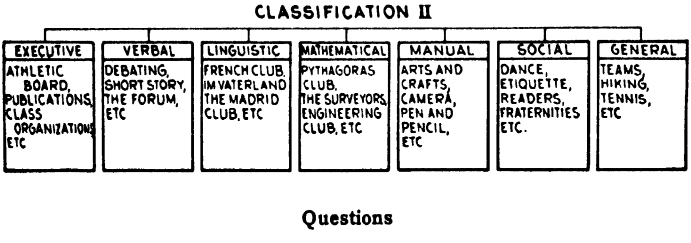
The following is the usual form of organization for extra-curricula activities:

CHART 15


PRINCIPAL EX-OFFICIO
GENERAL COUNCIL COMPOSED OF THE TEACHER ADVISER AND THE EXECUTIVE OFFICER OF EACH GROUP
LEADERSHIP CLUBS ONE FOR BOYS, ANOTHER FOR GIRLS
TEACHER ADVISER, OFFICERS AND EXECUTIVE COMMITTEE FOR EACH GROUP
CLASSIFICATION I
ACADEMIC
HAVING TO DO WITH STUDIES SUCH AS FRENCH CLUB, ENGINEERING CLUB, NATURE CLUB, ETC.
ADMINISTRATIVE
SUCH AS CLASS ORGANIZATIONS, ATHLETIC BOARD PUBLICATIONS, ETC
THE ARTS
SUCH AS ORCHESTRA, GLEE CLUB, CRAFT CLUB, STUDIO CLUB, ETC.
SOCIAL
SUCH AS CHESS CLUB, HIKING CLUB, DANCE CLUB, ETC
GENERAL
THRIFT CLUB, FRATERNITIES, SORORITIES, ETC.

It is proposed to maintain the same administrative organization with the addition of the Director of Vocational Guidance as Chairman of the General Council, and to reclassify the activities on the basis of their try-out values for guidance purposes as follows:

CHART 16


CLASSIFICATION II
EXECUTIVE
ATHLETIC BOARD, PUBLICATIONS, CLASS ORGANIZATIONS ETC
VERBAL
DEBATING, SHORT STORY, THE FORUM, ETC
LINGUISTIC
FRENCH CLUB, IM VATERLAND THE MADRID CLUB, ETC
MATHEMATICAL
PYTHAGORAS CLUB, THE SURVEYORS, ENGINEERING CLUB, ETC
MANUAL
ARTS AND CRAFTS, CAMERA, PEN AND PENCIL, ETC
SOCIAL
DANCE, ETIQUETTE, READERS, FRATERNITIES ETC.
GENERAL
TEAMS, HIKING, TENNIS, ETC

### Questions

1. What particular purpose is served by the first classification? Values developed?

2. What particular purpose is served by the second classification? Values developed?

3. What are the special values in the first classification that are not retained in the second?

4. Is either plan any more difficult to administer than the other?
5. Would all of these activities lend themselves equally well to guidance or try-out purposes? Which most? Which least? Why?
6. Develop an outline of the procedure you would follow in developing the try-out and guidance values of these activities.
7. About how long would it take you?
8. Would you do this with all activities at the same time or would you begin with the most favorable first? Which appear most favorable? Which least?

### THE TRY-OUT VALUES OF VACATION AND AFTER-SCHOOL EMPLOYMENT[7]

When discussing try-out values of (1) the so-called try-out courses and (2) the extra-classroom activities, one must not overlook the try-out or guidance values that exist in (3) vacation, part-time, and after-school employment.

It is well known that a large proportion of both juniors and senior high school students are employed at some form of remunerative employment outside of school hours. In many cases the work is performed solely for its financial reward and probably has little try-out value. But it is quite certain that, if the guidance adviser should arrange and classify the opportunities for this type of employment, many positions of decided try-out values would be developed.

A thoroughgoing analysis and diagnosis of each student should be made a part of the guidance system of any junior high school. A complete, accurate, and detailed record of all phases of the student's life, so far as it is ascertainable, should be kept throughout the junior high school period. Tests of all kinds should be given, recorded, and the results interpreted and finally used as a basis for advice and guidance. This is the diagnostic side of guidance.

### VOCATIONAL INFORMATION CLASSES

Another important phase of guidance in the junior high school is the informative or the giving of vocational information. Much has been said and written about this particular phase of guidance, but the surface has hardly been scratched.

In the majority of junior high schools, the administrators seem to feel that they have fulfilled their function in regard to vocational information if they set aside one or two periods of 45 minutes each for a class in occupations, which is usually taught by the teacher of civics or of English, who quite generally knows very little about the occupations, the conditions of work and service, and the requirements for entrance and progress in either business or industry.

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[7] For further discussion of the topic, see p. 160, this chapter.

The usual method is to order quantities of one of the few textbooks on occupations. These are distributed to the class, assignment made exactly as in other subjects, and amiable discussions are held concerning them. The same textbooks and the same lessons are given to all students, and the task is assumed to have been well done.

A method of collecting and disseminating vocational information which is quite different and distinct from that now in use is described in Chapter XVI.

### INDUSTRIAL ARTS COURSES IN THE JUNIOR HIGH SCHOOLS AS TRY-OUT COURSES

Much has been said and written concerning the great value of the so-called "try-out" courses in the junior high schools, and the statements have quite generally been accepted at their face value. This situation is unfortunate, because it is quite settled that the limited offerings of practical work in the shops of the junior high schools do not in themselves, except in meager fashion, constitute real "try-out" courses.

It is not the purpose of the writer to depreciate the value or the advisability of having shop work in the industrial arts in the junior high school. We need more of it, with better organization and better teaching. It is one of the fine things in the junior high school organization. These courses may or may not have try-out, prevocational, or vocational value. Up to the present time no studies have been made to prove that they do have any of these values either quantitatively or qualitatively. We are fairly certain of its general educational value. The recent work of Thorndike tends to assure us of that.[8] We are not at all sure of the try-out value of this industrial arts work. The probabilities are that it has none, except possibly negative values, that is, that the student discovers that he has no capacity or liking for that one kind of work.

Before we can claim definite "try-out" values for these courses we shall have to answer many questions, such as:

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[8] THORNDIKE, F. L., "Mental Discipline in High School Studies," *Journal of Educational Psychology*, vol. xv, No. 1, pp. 1–22; No. 2, pp. 83–98.

1. On what data was the choice of the try-out course made? For the individual? For the school?

2. What percentage of the graduates of this course have actually chosen, been trained for, and enter upon the practice of that vocation?

3. Are the conditions of the school shop and the requirements of the work so similar to the actual working conditions on the job as to justify us in claiming that it does constitute a real try-out? How were these actual job working conditions ascertained?

4. Do the students in these try-out courses really understand and appreciate the purpose of the procedure and the factors involved in adopting or discarding any of the vocations as represented by the try-out courses?

5. Do the students who do not take try-out courses decide upon, enter and make progress in vocations equally as well as those students who do take try-out courses?

It seems that our whole industrial arts program of the junior high school, from the standpoint of try-out values, is based upon the naïve assumption that the economic activities of our civilization are limited to bench work in wood, a little wood turning, the making of cups and dustpans out of tin, electrical wiring and radio, a little machine shop work and printing.

If we would make a study of the activities whereby the alumni of our junior high schools, or people generally, earn a living, and then turn around and look at the so-called "try-out" courses of the junior high schools, we would easily see how ridiculous is the generally accepted claim for try-out values in these industrial arts courses.

The solution to this problem of try-out courses in the junior high school is to conceive of all courses and all extra-classroom activities on the basis of their being try-outs and to reorganize or reconceive all courses and activities on that basis.

### THE LIFE-CAREER MOTIVE[9]

The student during the adolescent stage in the junior high school is particularly susceptible to the life-career motive. One of the extra-classroom activities of the junior high school should certainly be the formation of a variety of life-career clubs.

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[9] See ELIOT, CHARLES W., *The Life Career Motive in Education*, Houghton Mifflin Company, New York.

*These clubs should be organized for homogeneous case groups and conducted with the limitations and the potentialities of each case group clearly in mind.* They should develop the life-career motive and all possible means of satisfying it. These life-career clubs should then act as feeders to other extra-classroom activities and also to more specifically prevocational or vocational courses that may be offered within the school system.

The same process of analysis and segregation of the entire junior high school population should be followed as was advocated for the elementary school group. Particularly sharp watch should be kept that close contacts be established with all individuals in the school. At present the information now on hand seems to indicate that the junior high school has not made good in its avowed purpose of holding in school a larger proportion of its enrolment than other schools. This is quite probably explainable in terms of the failure of the junior high school really to exercise effectively its prime function of guidance.

Tests of all kinds should be given, data collected, and students segregated on the basis of their intelligence levels and their probable educational and vocational future, as indicated by their intelligence levels and other equally important data.

## SECTIONING CLASSES IN THE JUNIOR HIGH SCHOOL

It is now quite a common practice to organize A, B, C, and D sections of the same subjects of study on the basis of levels of intelligence. It is probable that the larger proportion of the sections containing those students with the higher I.Q.'s will not only be more successful in the work of that particular subject, but will also make steady progress in a regular orderly way into high school and college. Those sections with the middle level of intelligence will doubtless graduate from the junior high school with fair marks; some may enter high school and even graduate, but the proportion will not be as high as those of the higher sections. The individuals in the lower sections will probably have a hard time maintaining themselves in, and will do quite well if they graduate from, the junior high school.

It should be kept clearly in mind at this time that the process of elimination and selection becomes quite noticeable in the junior high school. It is quite doubtful whether individuals who are much below normal in intelligence can graduate from the junior high school. Only exceptional cases can maintain themselves in senior high school, and seldom do they graduate. The recognition of this important fact in the adjustment of sections for the various case groups constitutes in itself guidance of the most vigorous type.

A group that is easily recognized by means of scientific tests is that group that will most likely make a good record in junior high school, will graduate, and a large proportion of which will enter the senior high school. These need to be guided in their choice of high schools and courses. Another group, unfortunately a large one, will not complete junior high school but will leave to take their place in industry or business. These students should be recognized as soon as possible and their courses sharply adjusted so as to provide them with the most effective means of making their entrance into business and industry as efficient as possible.

The administrator of a junior high school who will organize a complete system of guidance on a scientific basis and allow it to function to the fullest extent will make a professional reputation for himself that will be the envy of all his colleagues.

## III. VOCATIONAL GUIDANCE IN THE SENIOR HIGH SCHOOL[10]

The organization of a guidance system in the senior high school (sophomore, junior, senior years) is in its elements similar to that of the elementary school and the junior high school. One fact, however, must be kept clearly in mind, and that is that the senior high school is dealing with a highly selected group. The students have been selected on several bases, such as, high I.Q., verbal, linguistic, or mathematical aptitude, social and economic status above the average, and good personality characteristics. We have here the cream of our secondary school population. The large majority may be ranked as possessing normal to superior intelligence. This does not necessarily mean that every one of these pupils should be guided into college or the university. It does mean, however, that the higher range of vocations are open to this group because of their superior intelligence.

On account of this superior intelligence, distinct aptitudes will be less likely to stand out and will be of less importance. It will be found that the majority of these pupils can do at least passable work in almost everything they attempt, provided, of course, that they have an interest in the subject and really attempt it in earnest.

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[10] See *Bull.*, No. 9, "Vocational Guidance in Secondary Education," Bureau of Education, Washington, D. C., 1918.

Try-out courses are available in the senior high school just as they are in the junior high school, although for some reason or other we find few people discussing try-out courses in the senior high school. A comparatively small proportion of the students in the last two years of the senior high school will drop out. Students in the third and fourth years see quite close before them the prize of graduation. They are a highly selected group not only on the basis of their intelligence, but also on the basis of their social and economic status. Students who have come through the third and fourth year of high school usually have little financial difficulty in continuing until graduation.

Senior high school students, then, may be divided into two main groups—*first*, those who will graduate, but will not go to any higher institution of learning; second, those who will graduate and will go on to some higher institution of learning. The first group, who will cease their institutional education with graduation from high school, need have no concern about college-entrance requirements. (Many high schools are now graduating students with the distinct understanding that the diploma shall not be used for college entrance.) These students should be advised and guided into those courses that will enable them to make the most effective entrance into the economic world, while at the same time satisfying the formal requirements for high school graduation. When discussing this problem, mention is almost always made of those extremely rare students who graduate from a high school without considering college entrance requirements and who a year or two later decide to go to college and find that they have difficulty with the entrance requirements. A study of this particular situation leads us to believe that these cases are so rare that they must be treated as individual and exceptional cases.

*The second group*, those who will graduate and intend to go on to some higher institution of learning, need definite guidance that is both educational and vocational. A thorough analysis of the individual should be made, and he should be advised on the basis of this analysis to enter not only a certain specified college but also a certain course within that college or a certain college within the university. If the individual is aiming for entrance to a professional course, then this guidance is distinctly vocational. If he is aiming for entrance to the liberal arts course and has no vocational objective, then it is distinctly educational guidance.

The vocational guidance adviser in the senior high school should have available the catalogues of all colleges, universities, and technical and special schools which any of the graduates of that high school may possibly enter.[11] At or before the beginning of the work in the senior high school, students who have made a definite choice of college and course should be advised concerning the precise entrance requirements for that college and course, and guided into high school courses which will satisfy these entrance requirements.[12]

Especially during the last two years of high school should note be taken of the work of the student, his marks, his failures, and his successes, so that, if necessary, adjustments may be made concerning his college-entrance requirements.

## IV. GUIDANCE IN THE FOUR TYPES OF PART-TIME SCHOOLS[13]

### Part-time Schools Defined

Much confusion exists at the present time in the minds of educators in regard to the terminology and the definitions of the various types of part-time schools and classes. The Federal Board for Vocational Education has given us both terminology and definitions which should be adhered to so as to avoid confusion:

> A *part-time* school is any school conducted for a limited number of hours during the regular working day. Such a school is open to minors and adults who have entered upon employment, and its several aims are to *continue* neglected or interrupted elementary education and to *prepare*

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[11] See *Educational Directory*, issued annually by the U. S. Bureau of Education, Washington, D. C.

See Sargent, P. E., *A Handbook of the Best Private Schools*, published annually at 50 Congress St., Boston, Mass.

[12] Brewer, J. M., "Guidance in the High School with Special Reference to College Entrance," *The School Review*, vol. xxix, No. 6, June, 1921, pp. 434–443.

[13] For a more complete discussion of the part-time schools and classes, see Payne, Arthur F., *Administration of Vocational Education*, McGraw-Hill Book Company, Inc., New York, 1924, chap. xii. Also "Part-time Trade and Industrial Education," *Bull.*, No. 19, Federal Board for Vocational Education, Washington, D. C., 1918.

for entrance into better occupations or to supplement and *extend* knowledge and skill in present occupations. (*Bull.* 19, p. 8.)

Such part-time classes must be classes which divide the working-day or school time between instruction and practical work in shop, factory, home, office, etc.

"To divide" means here not to separate the working-day and school time into equal parts; but to apportion or distribute the total working-day so that a portion of it is given to employment in shop, factory, home, or office, etc. (*Bull.* 1, p. 28.)

### PART-TIME SCHOOL POPULATION

Burdge, in his study of New York State boys, found that:[14]

Regardless of the size of the community, nationality, parentage, guardianship, and rank in family, that:

1. About 30 per cent left school before 15 years of age.
2. About 38 per cent left school between 15 and 16 years of age.
3. About 26 per cent left school between 16 and 17 years of age.
4. The 25-percentile boy left school at about 14.8 years of age.
5. The median boy left school at about 15.5 years of age.
6. The 75-percentile boy left school at about 16.2 years of age.

This is in a state that has a compulsory law up to 14 years of age and to 16 if unemployed and compulsory attendance in part-time schools from 14 years of age.

The comparative percentage of child workers in the groups of States are as follows: New England, 7.7; Middle Atlantic, 5.5; East North Central, 4.4; West North Central, 3.9; South Atlantic, 14.3; East South Central, 17.5; West South Central, 12.7; Mountain, 4; Pacific, 3.1.

The following is quoted from *School Life* (U. S. Bureau of Education), August, 1920:

It is estimated that 70,546 young people of New York City, between the ages of 15 and 17, who have not completed the elementary course of study and who have left school to go to work, will be required to return to school in the fall for four hours' instruction weekly. In September, 1921, the number will be augmented to 106,546; in 1922, to 134,304; and in 1923, to 166,131. When the new law regulating the continuation schools is in full operation, in the fall of 1924, the number will be increased to 186,131.

During the school year of 1920–21 Massachusetts had enrolled in part-time schools 27,500 students between the ages of 14 and 16. For the same period and ages, Pennsylvania had enrolled

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[14] BURDGE, H. G., *Survey of* 245,000 16-, 17- *and* 18-*year-old Employed Boys in New York State*, Fredonia Normal School, Fredonia, N. Y.

34,116. R. O. Small, Director of Vocational Education in the State of Massachusetts, says that "6 per cent of all 14- to 16-year-old youth, and 80 per cent of all 14- to 18-year olds are out of school and at work."

The name "part-time school" is given to any school to which the definition just given applies. When the school aims to complete general education, it is designated a *part-time continuation school;* when it aims to increase skill and intelligence in a vocation other than that in which the pupils are employed it is a *part-time trade preparatory school;* and when it provides training that is strictly supplementary and related to the employment of its pupils, it is a *part-time trade extension school.* (*Bull.* 19, p. 8.)

Here, then, we have a definition of (1) part-time schools as a group; (2) a part-time general continuation school; (3) a part-time trade preparatory school; (4) a part-time trade extension school. The Federal board has, in addition, made the following ruling concerning the so-called cooperative courses found in many high schools:

### COOPERATIVE COURSES

Question: When pupils work in a class in a privately owned shop on alternate days, weeks, or months, are such schools to be considered all-day or part-time? What principles are to determine in any given year?

Answer: The determining factor is whether the pupils, when in such shop, are entirely under the supervision and control of the school. If they are, it is an all-day school. If not, it is a part-time school. This is true regardless of the fact that the pupils are or are not paid. The final test is whether or not the shopwork is carried on independently or as an integral part of the school. (*Bull.* 1, p. 40.)

### THE EXTENT OF THE FIELD

The importance and extent of the field of this new type of education is indicated by an estimate of children of 14 to 18 years of age not attending school made by the Federal Board for Vocational Education.

TABLE XXIII

| | |
|---|---|
| Children between 14 and 15 years of age not attending school in 1918 | 990,000 |
| Children between the ages of 16 and 18 not attending school in 1918 | 4,030,000 |
| Total between the ages of 14 and 18 | 5,020,000 |

*Approximately 2,000,000 children arrive annually at any given age between 14 and 18. In these years the proportion not in school increases rapidly from less than one-fifth for the age 14 to nearly four-fifths for the age of 18.* We may safely conclude that about 5,000,000 children 14 to 18 years inclusive are out of school, and that practically all of the boys and a large proportion of the girls not at school in these ages are at work. A large proportion of these young workers have left public school without completing an elementary education or preparing themselves for any specific vocation. Children of this type are leaving the public schools today at the rate of a million a year, and the facilities offered up to this time for giving them any vocational training or preparation for earning a living have been so inadequate that it is hardly worth while to enumerate them.

The 1920 United States Census shows a total of 12,502,582 children between the ages of 10 and 15 years inclusive in the United States, and of these 1,060,858 were engaged in gainful occupations.

We have heard a great deal about the function of the junior high school in regard to self-discovery, diversified experiences, try-out courses, and guidance. It has also been stated that the junior high school in present practice, at least, has failed to function effectively in this particular field. The part-time schools and classes of the four types:

1. The general continuation school
2. The trade extension part-time school
3. The trade preparatory part-time school
4. The cooperative part-time school

offer a need and an opportunity for real guidance work that is not surpassed anywhere in our school system, and it is quite within bounds to say that our part-time schools, organized as they have been and now are, in dilapidated and condemned school buildings under extraordinary pressure of enrolment, with extremely few textbooks available or courses outlined, have made as good a beginning and have rendered equally effective service in regard to vocational guidance as have our much advertised junior high schools. We must keep in mind, when considering this situation, that the clientele of the part-time schools are all over 14 years of age, that is, of secondary school age and, instead of being in the junior and senior high schools, they are drifting about in the economic world, for the large part unguided and untrained.

Mr. Kersey, Director of Part-time Education, Los Angeles, makes the following statement:

The general academic continuation education is planned and directed to the end that juniors may have opportunity to accumulate a fund of general information which will be readily available as a basis for the foundation of sound future judgments. Vocational continuation school work is primarily directed along three lines:

1. Occupational finding, information or vocational guidance instruction.
2. Occupational continuation work, where portions of continuation school periods are devoted to particular phases of training which have a direct bearing on the progress of the individual on his job as well as a direct relation to his production.
3. Actual vocation instruction which includes specific job training in commercial and industrial fields.

## THE ATTITUDE OF THE FEDERAL BOARD TOWARD GUIDANCE IN THE PART-TIME SCHOOL[15]

The Federal Board for Vocational Education has placed itself on record in regard to guidance in part-time schools as follows:

> Guidance is essentially a humanizing factor which must permeate every phase of effective part-time school service, including vocational, moral, social, and educational activities.
>
> Placement has as its purpose the realization of the guidance possibilities through the directing of boys and girls to positions best suited to their growth and development.
>
> The guidance and placement service will be found to be among the greatest aids toward making the part-time school program a success.[16]

This same bulletin on page 49 makes the following suggestions for the attainment of the guidance objective in the part-time schools:

1. Discussion of guidance and placement; use of cases.
2. Discussion of opportunities for guidance and placement cases.
3. Analysis of jobs and of occupational opportunities and requirements by samples.
4. Analysis of individual needs and responsibility, social, moral, and vocational.
5. Making analysis and evaluation of individual pupil's guidance needs, and possibilities; a self-analysis to determine one's fitness for a

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[15] KERSEY, V., Director of Part-time Education, "Progress in Part-time Education," *Los Angeles School Journal*, vol. v, No. 38, June 12, 1922.

[16] *Bull.*, No. 85, Trade and Industrial Series, No. 24, "Program for Training Part-time School Teachers," Federal Board for Vocational Education, Washington, D. C., June, 1923, p. 40.

*position of given specification will help the teacher to objectify this problem.*

6. *Practice in defining individual needs in terms of objectives.*
7. *Practice is prescribing for individuals' immediate needs by citation of cases and reports of discussions and criticisms.*
8. Discussion of adjustment to changing future needs by conferences *with experienced counselors.*
9. Practice in gathering, evaluating, preparing, and filing reference material with guidance or placement value.
10. Discussion of uses of all types of guidance material.
11. Practice in the preparation and the presentation of guidance talks for use in classes, assemblies, etc.
12. Check-up of instructional material, courses, and school activities for guidance purposes. Discussion of the possibilities of, necessity for, and governing factors of cooperation with local agencies that have guidance or placement possibilities.
13. Discussion of the possibilities of cooperation within the continuation school.
14. Discussion and development of the minimum of essentials of records for guidance and placement.

## V. THE RESERVOIR OR ENTRY CLASS OF THE CONTINUATION SCHOOLS

The function of the "reservoir" class of the continuation school should be preeminently and exclusively examination, analysis, diagnosis, adjustment, and guidance. By the "reservoir class" is meant that class to which all new students are assigned for registration and assignment to courses. They should be held in this class a minimum of four hours for even the most obvious cases, the usual arrangement being for all new students to report to the "reservoir" or "entry" class for the first two weeks of attendance.[17]

Although this reservoir class is designated as a class, little teaching of a formal character is done in it. The teacher follows no schedule or program of study or lessons. Nothing taught in this so-called class is subject to examination. The incoming student first reports to the office, then is assigned immediately to this entry class. There his records are checked and his employment certificate or working permit validated or viséd.

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[17] See KEYES, L. C., "Vocational Guidance in the Continuation School Entry or Reservoir Class," *The National Vocational Guidance Association Bull.*, No. 10, vol. i, Bureau of Vocational Guidance, Harvard University, Cambridge, Mass., May, 1923, p. 174.

Then the first task is to make a detailed analysis of the individual in all possible aspects, and a compilation and examination of cumulative records of all phases of his life, such as physical condition, social and economic status, intelligence level, aptitudes, interests skills, achievements, etc.—so far as it is possible to obtain them.

After this analytical diagnostic study of the individual has been made, educational and vocational information should be presented to the student for guidance purposes. The educational information should consist of an explanation of the educational opportunities open to him and especially the diversified offerings of that particular school. The diversity of these offerings in this type of school is indicated by the following list taken from the "Opportunity News" published by the Brooklyn Continuation School.

TABLE XXIV.—COURSES OFFERED IN THE BROOKLYN CONTINUATION SCHOOL

GIRLS

*Homemaking*

*Sewing and Dressmaking*

1. Crochet Beading
2. Embroidery
3. Hand Sewing
4. Drafting and Cutting
5. Machine Sewing
6. Designing

*Millinery*

1. Elementary
2. Cutting
3. Assembling
4. Designing

*Novelty Work*

1. Elementary
2. Advanced

*Vocational Counseling*

GIRLS AND BOYS

*Commercial*

1. Bookkeeping
2. Typewriting
3. Mimeographing
4. Multigraphing
5. Office Practice
6. Machine Practice
7. Business Practice
8. Business Law

*English and Citizenship*

*Academic Subjects*

1. Related to Vocational
2. Civics
3. American and Industrial History
4. English: Oral and Written
5. Mathematics
6. Manners and Morals
7. Safety and Hygiene

*Employment Bureau*

AT THE NAVY YARD APPRENTICE ANNEX

*Hull Division*

1. Boatbuilding
2. Joining
3. Painting
4. Plumbing
5. Sailmaking
6. Sheet-metal working
7. Shipfitting
8. Shipsmithing

*Machinery Division*

1. Shipwrights' work
2. Boilermaking
3. Coppersmithing
4. Die Sinkering
5. Electricity
6. Machining
7. Molding
8. Pattern Making

TABLE XXV.—A LIST OF COURSES OFFERED IN THE CONTINUATION SCHOOLS OF NEW YORK CITY

1. Electrical
2. Drafting
3. Machine Shop
4. Wood Work
5. Printing
6. Sewing
7. Cooking
8. Millinery
9. Auto Mechanics
10. Pattern Making
11. Dressmaking
12. Home Nursing
13. Sheet Metal
14. Cabinet and Mill Work
15. Foundry
16. Power Machine Operating (Sewing)
17. Telegraphy
18. Carpentry
19. Tool Making
20. Forging
21. Commercial Art
22. Architectural Drawing
23. Wireless
24. Machine Design
25. Shoe Making
26. Music
27. Plumbing
28. Flower Making
29. Hairdressing
30. Manicuring
31. Embroidery
32. Baking
33. Tailoring
34. Welding
35. Concrete Work
36. Bricklaying
37. Gas Engine
38. Shop Mathematics
39. Industrial Chemistry
40. Shop Problems
41. Vocational Civics
42. First Aid
43. English for Printers
44. Industrial Hazards
45. Material Testing
46. Electrical Mathematics
47. Blue-print Reading
48. Typewriting
49. Bookkeeping
50. Salesmanship
51. Business Practice
52. Stenography
53. Business English
54. Trade Spelling
55. Penmanship
56. Commercial Geography
57. Comptometry
58. Filing and Indexing
59. Office Machine Operating
60. Costume Design
61. Department Store System
62. Merchandising
63. Advertising
64. Arithmetic
65. Men's Garment Design
66. Novelty Work
67. Reading
68. History
69. Elementary Economics
70. Jewelry
71. Community Civics
72. Optics
73. Butcher
74. Grocer
75. Laundry
76. High School Academic Subjects
77. Personality
78. Special Pupils
79. English to Foreigners
80. Mental Defectives

In an ideal organization the student entering the continuation school for the first time would bring with him—or at least there would automatically appear—all available records and information from the grammar and other schools attended. These data should be studied and filed during his period in the reservoir class.

The next step is to develop the right kind of attitude on the part of the student toward the continuation school and its work. He should be made to feel that this is in no sense a punishment, but that the sole purpose of the continuation school is to be of benefit to him.

Each student might be presented with a single printed or mimeographed sheet, in the form of a letter of welcome, accompanied by an explanation of the law and its requirements and the general purpose lying back of the law which has brought him to the continuation school.

An opportunity should then be given—by a questionnaire or form—the student to express himself, his desires, his interests, his ambitions, and his own particular needs. Make him see that this is the beginning of a new phase of his education, and that the chief motive of the continuation school is to be of greatest possible service to him.

A classified list of occupations should be presented to him with a few remarks concerning each, developing the possibilities, the type of individual required by each, the entrance requirements, the length of the training period, etc., in order to start the student thinking in a purposeful way about his present and future economic status.

Next, there might be presented to the student a list of the courses and classes that are offered in the continuation school, with the near and far objectives. This list should include not only the formal courses and classes, but also the extra-classroom activities, such as life-career clubs, hiking clubs, gymnasium, photography clubs, etc.[18] As on the other sheets, an opportunity should be given the student to express what he conceives to be his own needs and desires.

Then there might be presented to him a sheet explaining the importance of choosing an occupation, and then a list of the factors which must be considered when choosing such an important thing as a life occupation.

By this time the student should be in the frame of mind where he is willing to cooperate in the matter of taking tests, filling out more specific questionnaires, playing his part in choosing a vocation, and choosing and entering courses which are offered in the continuation school, or in other schools which might be suggested to him as a result of his interview with the adviser.

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[18] See list of extra-classroom activities on p. 155.

The results of this entire procedure should be:

1. An attitude of cooperation and earnestness on the part of the student, with an understanding of his own assets and liabilities.
2. A definite, systematic diagnosis of the student by the adviser.
3. A common agreement and decision as to an educational program and schedule, leading to either (*a*) promotion in the present employment or (*b*) preparation for entrance to a different employment or vocation.
4. A desire on the part of the student for correction and for a program enabling him to strengthen any weaknesses—physical, educational, moral, or vocational—which have been developed during the diagnostic process. The pupil should then be inducted into those courses and activities which have been scheduled on the basis of the information obtained from the analytical diagnostic examination.

In no case should this assignment be considered as conclusive and final. The work of each student, and its relationship to his sometimes often changing employment and to newly discovered or developed abilities, capacities, and potentialities, should be continually checked-up. *The outstanding feature of the program of any* 100 *per cent continuation school is the flexibility and the ease with which it may be adjusted to meet the specific needs of particular case groups or individuals.*

Adjustments and readjustments should take place throughout the entire continuation school period, and on graduation (at 16, 17 or 18 years of age) each student should possess a fairly well-defined conception of his capacities and abilities, and the possibilities for future development for him in certain lines of educational and economic activity.

The placement phase of the vocational guidance system should be functioning all along the line, and there should be no hesitancy in advising a student to abandon one job in order to take another which offers more opportunity for progress and development. The job abandoned by one student may be filled by promoting another student from a lower level.

## COORDINATORS IN PART-TIME SCHOOLS[19]

One of the most effective factors is efficient vocational guidance in part-time schools is the coordinator. That the Federal Board for Vocational Education has a full sense of the importance of this particular office is indicated in the following quotation:

> Instructors in part-time schools and classes paid in part from Federal moneys may serve also as coordinators of work between the school and the employment or work of the pupil. By coordinator is meant the person who supervises or correlates the class instruction and the practical experience of part-time students.[20]

## THE FUNCTIONS OF THE COORDINATOR

The function of the coordinator in part-time schools is that of a link between the school and employments. He should exert both pull and pressure on both sides.

The qualifications of a good coordinator may be stated about as follows: He or she should be a good socialized school man, well acquainted with industry, workers, employment managers, etc. He must be able to qualify under the standards set up by the Federal Board for Vocation Education; he must be keen, observant, analytical, tactful, and above all adaptable. He should be well acquainted with the psychology of the adolescent, with the latest pedagogy, and with the modern tendencies in industrial and commercial organizations. His personality must be such as to command respect at all times and under all conditions.

His main job is that of selling ideas. He must in a tactful way sell the idea of a change in course or method to the principal and teachers. He must be able to persuade the student in regard to the value of course content or of a change in course. He must sell himself and the continuation school idea to the employers, employment managers, foremen, and workers generally. He must continually develop new values, new relationships, new projects, new problems, different methods of teaching, obtain the cooperation of parents, and use all means to arouse ambition in the continuation school students.

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[19] ALLTUCKER, M. M., "Coordination in Part-time Education," *Bull.* No. 3, Part-time Education Series, No. 4, University of California, Division of Vocational Education, Berkeley, Cal.

[20] "Part-time Trade and Industrial Education," *Bull.*, No. 19, Trade and Industrial Series, No. 3, Federal Board for Vocational Education, Washington, D. C., 1918, p. 35.

He must be able, in a tactful way, to get the foreman to give each student a square deal, to see the necessity of educated workers, to obtain from the foreman information and ideas, and technique, that he can carry to the classrooms and shops of the part-time schools.

He must be continually furnishing new instruction material and promoting instruction by occupational analyses, the development of analysis charts, the discovery of educational content, trade knowledge, and promotion sequences. He must insist upon close correlations of the classroom work and the school shop work, and of these two with the conditions of work and service in business and industry.

His responsibility is to assist quite materially in placement, and particularly in the follow-up of placement. He must, wherever possible, make trade agreements with unions or other groups, and with individual employers.

The coordinator must be a cooperator as well as a coordinator. He must cooperate with manufacturers' associations, unions, and the wide variety of employment agencies, philanthropic organizations, advisory boards, and all other community organizations.

He must collect statistics, develop data, draw charts, present special and general reports, and make case studies and surveys.

### VI. GUIDANCE IN THE PART-TIME TRADE EXTENSION CLASSES AND PART-TIME TRADE PREPARATORY CLASSES

At the beginning of the school year the part-time school group should be analyzed according to the following diagram:[21] Suppose we have a part-time population of 1,000 boys and girls. They would first of all be segregated in the most natural and obvious way, that is, by sex. The next segregation should be that of forming into one group those boys who are employed in or apprenticed to a recognized trade. If the groups for each trade are too small they should be formed on the basis of the general industry group, as indicated in Chart 17, such as automobile industries, metal-working industries, wood-working industries, electrical trades, building trades, printing trades, commercial occupations, etc. These groups can then be given class work in subjects which are definitely related to the trade or group of trades in which they are working. These related subjects will consist of drawing, mathematics, hygiene, and the science of the trade, trade group, or vocation.

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[21] PAYNE, ARTHUR F., *Administration of Vocational Education*, McGraw-Hill Book Company, Inc., New York, 1924, p. 234 ff.

CHART 17.—ANALYSIS OF HETEROGENEOUS MASS OF PART-TIME STUDENTS INTO HOMOGENEOUS GROUPS
Boys

| Trade extension | Trade preparatory | General continuation |
|---|---|---|
| Automobile Industries | Auto Repair<br>Tire Repair | Seventh Grade |
| Metal-working Industries | Machinist<br>Tinsmith<br>Jeweler | |
| Wood-working Industries | Cabinet Maker<br>Pattern Maker | Eighth Grade |
| Electrical Trades | House Wiring<br>Ignition, Motors | |
| Building Trades | House Framing<br>House Painting | First Year High School |
| Printing Trades | Hand Composition | |
| Commercial | All kinds of Office Practice<br>Salesmanship | Second Year High School |

In other words, guidance in the part-time school, in this particular respect, would result in the segregation of those boys who had already chosen a trade, had been placed in it, and were presumably succeeding in it, and in giving them vocational education courses in the related courses which would help them to progress in their occupations.

The second group to be segregated is the trade preparatory group, that is, the group composed of those students, either boys or girls, who, after analysis, have been advised to enter certain occupations, preparation for entrance to which can be given in part-time schools. These occupations may be auto repairing, tire repairing, machinist, tinsmithing, jewelry trade, tailoring, baking, or any of the occupations that might be found in the locality of the school. The same procedure should be followed with the girls, as indicated in Chart 18.

CHART 18.—ANALYSIS OF HETEROGENEOUS MASS OF PART-TIME STUDENTS INTO HOMOGENEOUS GROUPS
Girls

| Trade extension | Trade preparatory | General continuation |
|---|---|---|
| Clerical | Typing<br>Stenography<br>Filing | Seventh Grade |
| Salesmanship | Retail Selling<br>Store Systems | |
| Homemaking | Management<br>Cooking<br>Sewing<br>Budgets | Eighth Grade |
| Textiles | Dressmaking<br>Millinery<br>Factory<br>Mill | |
| Nursing | Infant Nursing<br>Invalid Nursing<br>Doctors' Assistants | First Year High School |
| Foods | Cooking<br>Serving | |
| Factories | Mechanical Drawing<br>Tracing<br>Assembling<br>Jeweler | Second Year High School |

The group which remains should be given work of a general continuation nature; that is, if they have left school in the seventh grade, they should continue to complete the work of the grade, the work being socialized, vocationalized, and made as practical as possible.

## VII. GUIDANCE IN THE PART-TIME COOPERATIVE CLASSES[22]

The Federal Board for Vocational Education has ruled that the part-time cooperative courses which are now found in many high schools may receive aid under the Federal Vocational Education law as part-time classes. These classes are usually found in the high school.

It is assumed that the students in the part-time cooperative courses have been guided into the occupations in which they are cooperating. It is probable, however, owing to the unscientific type of guidance now prevailing in our high schools, that these students have not really been scientifically or systematically guided into either the cooperative course, the particular high school, or the specific occupations in which they are cooperating. It is quite probable that some of these students will need considerable guidance. They will need to be replaced and readjusted. It must be remembered that in vocational classes students are presumed to have been guided into these classes, although, of course, at the present time that has been actually true in an extremely small percentage of cases.

## VIII. GUIDANCE IN THE OPPORTUNITY CLASSES

Another school unit in which guidance is needed is the opportunity class. The opportunity class in itself is the result of a positive form of guidance consisting of selection, elimination, and segregation. It must always be kept in mind that our public schools as at present organized function more or less as a huge machine for the selection of the fit and for the elimination of the unfit on the basis of ability or inability to do the work of the public school.

Students in the opportunity classes have been eliminated from the regular routine of the public schools and have been placed as a selected case group, that is, homogeneous in one element, that of inability to do the required work of the regular classes. They are not quite good enough to do the regular work, and not quite poor enough to be eliminated entirely from the public schools and placed in institutions.

These students, then, are in the opportunity schools or classes as a result of a selective form of guidance. Analysis should be made of the group to determine more precisely the exact level of intelligence possessed by each student, and particularly whether or not they possess any special capacities or aptitudes which might be developed and used as a basis for further education or intensive training, leading to final economic independence. In general, it will be found that these students have disabilities in regard to any form of abstract work. They will also have disabilities in regard to any form of skilled hand work, involving judgment, but nearly all can be given a varying amount of marketable skill along the lines of automatic, short-cycle, repetitional operations, such as rug weaving, basketry, etc., in which they can be drilled until the automatic sequence of operations becomes a part of their subconscious equipment.

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[22] PAYNE, ARTHUR F., *Administration of Vocational Education*, McGraw-Hill Book Company, Inc., New York, 1924, chap. xii, p. 216 ff.

It will be found necessary to supervise the majority of this group and all their activities closely. Guidance, then, for this particular group, consists mainly of an intensive individual analysis in order to discover the possible possession of certain capacities that may be of value in an effort to salvage as many as possible from this group of discards from our public school system.

### IX. GUIDANCE IN THE EVENING SCHOOLS

In general, four types of students will be found in the evening schools:

**1. Trade Extension Students.**—These students, presumably, have already chosen their occupations. They have either secured positions themselves, or have been placed by some form of placement agency, and now need to extend their knowledge of that occupation in order to make progress in that line of work. This, according to our definition in Chapter III is a legitimate part of guidance work. The students in this group should be guided into classes in the evening schools which are closely related to their daily occupations or to the lines of promotion in those occupations. It should be noted here that this type of class is the only type of evening vocational work that is given aid under the Federal Vocational Education Law (Smith-Hughes Act).[23]

**2. Trade Preparatory Students.**—These students need real guidance. They are presumably in so-called "blind-alley" jobs or juvenile jobs, or in jobs in which they are dissatisfied, unhappy, and therefore desire to make a change. Generally, throughout the country, the process of choosing and entering such an evening vocational class is one of chance, or else of guidance on the basis of administrative expediency. Seldom is the choice based on a study of the capacities and the aptitudes of the individual. There is a great need for systematic guidance work for this type of student in our evening schools. The same method of guidance should be followed as in other school units—the making of an analysis of the individual, a study of the jobs in which his possible success is likely to be the greatest, then the connection of the two by vocational education courses preparing specifically for entrance to the chosen occupation.

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[23] PAYNE, A. F., *Administration of Vocational Education*, McGraw-Hill Book Company, Inc., New York, 1924, Chap. xi.

3. **Americanization Classes.**—These classes are composed largely of adults who are there for the specific purpose of acquiring the English language, or obtaining certain specific knowledge concerning citizenship, the ultimate objective generally being that of getting either their first or second papers, thereby becoming citizens. Many of these individuals need guidance. It has been found quite often that these so-called "ignorant foreigners" possess valuable knowledge and skill, but, owing to their language disability, they have been unable to market this knowledge or skill. A survey made during the winter of 1923 of the Italians in the neighborhood of the North Bennett Street Industrial School of Boston, Massachusetts, developed numerous cases in which foreigners who could not speak the English language, but possessing a high degree of skill in high-grade vocations—some of them graduates of technical schools—were living among their own people, working at menial occupations, and were in consequence discontented, resentful, and unhappy. Vocational guidance for this group consists in the discovery of this training and skill, and the placing of the possessors of it in positions where it is of value, thus benefiting both society and the individual.

4. **Straight Academic Group.**—This group has almost finished the eighth grade or has made a start in the high school, and they are endeavoring to complete the requirements for graduation from some school unit. In many cases these students are working earnestly, following a definitely outlined plan, with a distinct objective in view. Most of the time, however, the members of this group go to evening school with undetermined objectives, no definite plan, and, in consequence, not much earnestness.

Vocational guidance for this group should consist largely of the development of the life-career motive. In many cases these students could be guided back into the all-day school or finish the grades or the courses in which they started. Many of these young people get discouraged and tired of the routine of our regular schools, go to work for a year or two, develop an appreciation of the opportunities for the education which they have lost, and are in a frame of mind in which they could quite easily be persuaded to go back and complete their work in the all-day school, provided the path was prepared and pointed out to them.

### X. VACATION ACTIVITIES AS PART OF A GUIDANCE SYSTEM

The public school is, in general, tending toward extending its control over minors, not only upwards in terms of years, such as raising the compulsory school age from 12 to 14, with compulsory attendance in continuation schools up to 18, or—as some states are now doing—gradually raising the compulsory school age in all-day schools up to the sixteenth year, with compulsory attendance in the continuation school up to the eighteenth year, but the schools are also gradually extending their control covering after-school work, and particularly vacation work. Both these fields of work are important for vocational guidance.

Many times a student could be held in school if some sort of part-time, after-school, Saturday-morning, or evening employment could be found for him. This would be equally true for employment during summer, Christmas, and other vacations. These out-of-school activities should be considered in two ways: first, that already discussed, for the sake of the financial returns, as a means of maintaining the student in school; second, the try-out values of such work.

Often where the try-out courses in the public school are limited, as is quite generally the case, these part-time, after-school, or vacation activities should be used as distinct try-out courses, to discover the possibilities of the success or non-success of the individual in that particular job. In fact it is probable that this after-school and vacation work has many more decided try-out values than the so-called "try-out" courses of the schools.

*The first step* that should be taken in developing this field of work is the making of a survey of the jobs open to students. The stores, offices, and factories should be canvassed with that end in view. The Chambers of Commerce, Boards of Trade, Rotary Clubs, Big Brothers, Elks, Y. M. C. A.s, and Y. W. C. A.s should be thoroughly surveyed for positions and needs in this particular field.

These jobs, as they are developed, should be analyzed and charted on the basis of (*a*) whether it is part-time or full-time during the vacation; (*b*) the general educational values inherent in the jobs; (*c*) the financal returns, (*d*) the try-out value of the job; (*e*) the possibilities of the job developing into a permanent position; (*f*) the promotion possibilities of the job.

*The second step* should be a survey of pupils who are available for these part-time positions. Then a second survey should be made to discover the capacities, the skills, and the needs of each individual. This data should be obtained by an analysis of the individual, supplemented by a questionnaire filled out by each student. Care should be taken at this point to differentiate between the curious-minded student who would be willing to take the job, provided it was a nice, easy job with high financial results, and the earnest-minded student who simply must have any kind of a job to maintain himself in school, and the student who should have a job of a certain type for the purpose of try-out or for developing better concepts of work along certain lines.

*The third step* in this field of work is that of placement—placing the right student in the right job. This is not an easy task and should not be done in a casual manner. It involves considerable adjustment and readjustment. A final placement should always be based upon personal interviews between the adviser, the student, and the employer. Furthermore, all this placement should not be left until the last few days of school. All the preliminary work should be done long before the last month of school, and the placement effected so that the student may begin work within a day or two after the close of school.

For graduates from certain courses, the placement might well be done even before the close of school. If the student is certain to graduate, it is much better to distribute the placement of such students over a period of several weeks or months rather than try to place them all at once as is usually done.

*The fourth step* is that of supervision. To get the real benefit from these after-school and vacation activities, some person must be made responsible for the supervision of this work. This person should develop a system of records and reports that will enable them to discover immediately any maladjustment or difficulties. Then provision should be made for that person to make adjustments or remove the difficulties.

*The fifth step* is that of a survey and a report of all students at the end of their period of employment. A check up should be made as to the amount of money received, treatment accorded, facts, knowledge, and skills acquired, and attitudes and points of view developed. A questionnaire should be sent to all the employers in an endeavor to get their reaction in regard to this type of work in general, and to some one student or group of students in particular.

This particular field of work is full of vital life-guidance possibilities, and should be systematically developed as a part of any complete guidance system. Particularly, it will be of value to the general educational administrator in assisting him to discover and measure the exact degree of functioning of the offerings of his school.

### GUIDANCE IN EDUCATIONAL UNITS OUTSIDE THE PUBLIC SCHOOLS

There are many units of our educational system outside of the public schools that have developed a need for guidance systems some of these are:

1. **Orphan Asylums.**—Here we have a decided need for the best guidance possible, and in such institutions we find one of our best opportunities for effective guidance.

2. **Settlement Houses.**—Social workers were the first group to sense the need, develop a plan, and start the work of guidance. They realize probably more than other groups the necessity for guidance toward and training for economic self-sufficiency.

3. **Reform Schools.**—Here we have a highly selected group of individuals—in fact, so highly selected that they represent a case group by themselves. Much individual diagnosis and advising will need to be done in such institutions.

4. **Y. M. C. A., Y. W. C. A., Y. M. H. A.,** and other similar organizations usually maintain an employment department as one of their activities and are continually attempting to solve the problems of the maladjusted individual.

5. **The Colleges.**[14]—The rapidly developing specialization of our college and university work has developed a need for some

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[14] See Wood, B. D., *Measurement in Higher Education*, The World Book Company, Yonkers, N. Y., 1923.

method of selecting and classifying students. The recent development of the "common freshman year courses," or "orientation courses," in our universities affords a real opportunity for the establishment of guidance systems, particularly for the freshman group. We also have the recent development of deans of women and deans of men, whose functions will inevitably develop more and more into that of guidance.

The following statements by the Director of Investigations of the society for the Promotion of Engineering Education[25] present the need for and present status of guidance in the professional schools. What is said here concerning the engineering college might equally well be said about all other professional schools:

> There is the problem of how to get the right kind of young men into engineering colleges. This is a problem of both attraction and selection. The grounds on which young men choose to enter an engineering college and to pursue a particular course of study appear to be almost pathetically meager. Parents, high school teachers, and others who are called upon for vocational or educational guidance appear to be very inadequately informed about the duties and activities of engineering, the opportunities it opens up, and the exactions it makes in the realms of body, mind, and character.
>
> The relatively high mortality in engineering courses tends to cast a great deal of doubt over the present standards of selection and admission. Taking the country as a whole, it seems probable that not more than 40 per cent of the men admitted to engineering colleges complete the courses and are granted degrees.
>
> The large mortality referred to seems to indicate that perhaps half of the men admitted to engineering colleges could be better served by some other educational plan. There is a great dearth of specialized vocational schools intermediate between high schools and four-year colleges in the American scheme of education.
>
> There is also a general interest in the possibility of establishing a diagnostic clinic to which students who are falling below standards may be sent for expert individual examination with a view to locating any remediable difficulties before considering suspension or exclusion.

In all of the educational units outside of the public school system it must be keep in mind that the clientele of these units has already been highly selected on the basis of one or more characteristics.

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[25] WICKENDEN, W. E., "Notes from the Field," *Engineering Education Bull.*, Society for the Promotion of Engineering Education, vol. xiv, No. 9, p. 508.

## CASE PROBLEMS

### ANALYSIS OF FIVE OPPORTUNITIES FOR ESTABLISHING GUIDANCE SYSTEMS

Assume that an opportunity is presented to you to establish a guidance system in *one* of the following:

1. A high-grade, exclusive private academy for boys of secondary age.
2. A junior high school in a city of diversified occupations.
3. A State school for feebleminded boys and girls.
4. A State industrial reform school for boys.
5. A State trade school for boys and girls.

Assuming all other conditions as being equal, which opportunity would you accept as being the most promising for guidance?

Make an analysis of the dominating factors in each situation and develop the reasons for your choice.

Present a *brief outline* of a guidance system for the school of your choice.

## CASE PROBLEM

### VOCATIONAL GUIDANCE IN A SMALL COLLEGE FOR WOMEN

The President of a woman's college of about 450 students located in a suburb of a large city has received from the alumni association of the college a communication recommending the establishment of vocational guidance in the college. The President knows very little about guidance, but desires to adopt the recommendations of the alumni association and asks advice and assistance in establishing a system of vocational guidance.

The college has one general curriculum, the objective of which is to "develop broadminded, cultured women." They have special courses in music (piano and voice), stenography, typewriting, and the principles and philosophy of education (text James' "Talks to Teachers").

### Questions

1. What would be your first step in preparing for the formulation of a guidance system?
2. The second and third step?
3. What do they obviously need besides a system of vocational guidance?
4. How would you prove it?
5. Is the student body probably a highly selected group? On what basis? What factors function in this selection?
6. Which type or phase of vocational guidance should be emphasized in this college?
7. What personnel would be needed to put your recommendations into effect?
8. Draft an itemized budget for one year covering the expense of your proposed system.
9. How would you determine whether or not any of the present personnel might be used in the guidance system?

10. If your plan would require the changing of the stated objective of the college, submit also an alternate plan that would not necessitate the changing of the objective.

## CASE PROBLEM

### Guidance in a State Reform School

The State Reform School at M, C, has about 300 boys, ages from from 8 to 21. All have been committed to this school by process of law for a wide variety of offenses. They all have indeterminate sentences, depending upon good behavior. If not released before, on probation, they are automatically released as they become 21 years of age.

The boys receive regular schooling five hours per day, work on the farm and about the grounds two hours per day in the summer, and cane chairs two hours per day in the winter. One and one-half hours are given to outdoor exercise and play. The rest of the time is their own. All are in bed nine hours.

The superintendent of this school has heard about the advantages claimed for vocational guidance and is ready to adapt any reasonable plan. He will not be allowed to hire a full-time specialist in guidance.

Work out a complete and detailed plan covering all points to submit to the superintendent. Keep particularly in mind the problems of vocational education and vocational placement.

## CASE PROBLEM

### Results Attained by Guided and Unguided High School Pupils[26]

In Proctor, *Psychological Tests and Guidance*, Public School Publishing Company, Bloomington, Ill., 1924, on page 30 the following data are presented:

Table XXVI

| Group | Out at work | Per cent | Out by transfer | Per cent | Failed one subject | Per cent | Failed 2 or more | Per cent |
|---|---|---|---|---|---|---|---|---|
| Guided | 1 | 4.5 | 2 | 9.1 | 4 | 18.2 | 0 | 0.0 |
| Unguided | 13 | 12.1 | 14 | 13.1 | 33 | 30.8 | 11 | 10.3 |

The above is a group of 107 high school pupils who were examined with the Stanford-Binet scale after entering. They had already selected their courses of study, hence can be designated, the unguided group. The comparison of their first year's work with the work of 22 who entered in February and had the benefit of counsel is recorded.

[26] For the presentation of this case problem the author has to thank M. A. MacDonald, a student in one of his classes.

### Questions

1. How would you go about getting similar statistics for your school?

2. Justify the value of such a survey to the superintendent? To the principal? To the teacher? To the student?

3. What was the median I.Q. of the guided group. Of the unguided group.

4. What method of directing was used in the unguided group?

5. Which group needs the most vocational guidance? The least?

6. What are the most significant facts to be found in the table?

7. What definite things can guidance do for students?

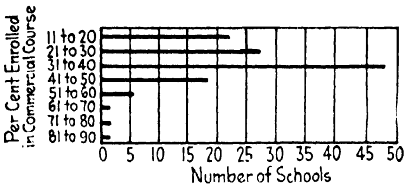
8. Outline a plan for finding the financial saving effected by the guidance of this group.

## CASE PROBLEM

### Students in Commercial Courses

Diagram 3 on page 10 of Lyon, L. S., *Education for Business*, published by the University of Chicago Press, presents the following data concerning the enrolment of students in commercial courses in 123 high schools:

Chart 19



### Questions

1. What is the usual procedure whereby students enter commercial courses?

2. Boston has from 50 to 60 per cent of its entire public high school enrolment in commercial courses. How do you account for this?

3. Where in this case problem does the "selected group" have an influence?

4. Would tests, try-out courses, and other phases of guidance tend to change these percentages?

5. Describe the condition which confronts the freshman in a high school that has a commercial course.

6. What are some of the probable factors which might account for the varying percentages in the diagram?

7. What guidance proposals have you to offer in this situation?

## CASE PROBLEM[17]

### Survey for Causes of High School Failure

The superintendent of schools of a certain city, in which are located two high schools, found that the failures in one school were 25 per cent of the number attending and in the other 15 per cent. He wrote a letter to the principal of the high school where the failures were 25 per cent, and asked him to make a survey of the situation to determine:

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[17] For the presentation of this case problem the author has to thank A. B. Sayre, a student in one of his classes.

1. If the students in the section where the school is located are, on the average, of lower intelligence than those of the other high school.
2. If the home environments of the students in the respective schools were unequally favorable to good school work.
3. If the students failing in his school are grouped according to any standard or common factor. If so, what?
4. If the conditions for study in his school are less favorable than those of the other school.
5. If the I.Q.'s and the students correspond to the courses that they are pursuing.
6. If the passing standards were the same in both schools.
7. If the teachers were equally well qualified to teach their respective subjects.

### Question

What guidance elements are involved in the above situation?

# CHAPTER XII

## A SCHEDULE OF OPERATIONS IN A COMPLETE GUIDANCE SYSTEM

The guidance system in our public or private schools will necessarily have to deal with the students in case groups, with individual treatment of the comparatively few cases that either do not fit into any group or who are sifted out of the groups by showing a need for special consideration. This case group procedure is essential if the costs of guidance are to be kept in proportion to the other costs of our educational system.

The case group method does not mean that there will be no individual diagnosis or advisement. In general, it will be found that the mass of students will break up in three groups:

1. Those who approximate the normal in all respects and pass through the guidance system as one of a segregated homogeneous group.
2. Those who belong to a group but need some slight consideration and adjustment because of some atypical element in their situation.
3. Those who are so atypical that they do not fit into any group except the abnormal, and therefore must be treated individually.

When handling any material in quantity it conserves time, effort, and cost if a routing chart and a schedule of operations or processes are drafted. It will be necessary to analyze the processes of guidance and organize a schedule of procedure, or a "routing chart," with "control stations" at which certain operations, tests, or examinations are given or performed, certain information collected, and certain advice given.

This analysis would, of course, vary according to whether the system was a large one or a small one, the number of people working in the guidance system, and the detail in which the guidance was done, but, in general, we would find that this whole system might be broken up into eight distinct divisions, namely:

### THE EIGHT DIVISIONS

1. Surveys for sifting out and segregating homogeneous groups.
2. First interviews.
3. First examinations.
4. First tests.
5. Advice.
6. Placement, educational or vocational.
7. Supervision.
8. Retesting, reguidance, replacement.

**1. Surveys.**—These surveys should be always under way and of various kinds. They should be for the following purposes:

(*a*) Sifting and classification, such as a survey of all 13-year olds. Survey of those reported as failing in the high school freshman class. Survey of the entry group of the continuation school.

(*b*) Surveys for the collection of data and information, such as surveys of vacation employment, vacation reading, vocational interests and objectives, opportunities for employment, part-time or apprenticeship.

(*c*) Surveys of graduates and non-graduates, employments and progress for the purpose of discovering the functioning of the educational and guidance systems.

These surveys should constitute a generally continuing activity, the results of which should be at hand as the individual comes in for the next step, which is the first interview.

**2. First Interview.**—In the first interview, whether it be an interview as a special case, or an interview for advice upon the choice of a course, application for working papers, etc., the student should be held responsible for and should be required to bring:

(*a*) *Birth certificate* or satisfactory evidence of age, which may consist of birth certificate, baptismal certificate, passport, emigration record, school register, statement from priest, or statement from school physician. Blanks and forms should be developed for collecting and recording this information.

(*b*) *The Consent of the Guardian.*—If the student is leaving school, then the guardian should appear in person, or if the change in course or the decision being made is of sufficient importance to justify requiring the presence of the guardian.

**3. First Examinations.**—Under this control station we should obtain and record:

(*a*) The result of *physical examination.*

(*b*) *The health record* of the student.

(*c*) *The school record,* not only as regards regularity of attendance, grade attained, and retardation, but also changes made from school to school, truancy record, and particularly the marks in the various school subjects and the teachers' estimates.

(*d*) *The Family Record.*—In some cases this will be of the utmost importance, in others not so important. In some cases it will be advisable and necessary to go into the family history and its present circumstances quite exhaustively. In special cases it will be necessary to inquire into the home conditions; any police court records of members of the family; whether they have been assisted by charitable associations; the presence or absence of insanity, epilepsy, and fits; the presence of "queer," "eccentric," "nervous" people in the family; the age and grade attainment of brothers and sisters; the occupations of members of the family, etc.

(*e*) *References.*—There is little agreement upon this question. In general, it will be found that the greatest value in requiring a student to give references is that he is more likely to tell the truth and not to exaggerate in his statement if he expects his statements will be checked up.

(*f*) An inquiry into the *economic status* of the individual, pupil, and of his family. It is useless under our present social and educational organization to advise a boy to go to high school, then to college, and then to medical school—even if he may be potentially a great surgeon—if he is the oldest of a family of six, his father is a hopeless invalid and his mother is doing janitor work. Happily, these cases are exceedingly rare, although the sentimentalists so frequently use them as examples that one gets the impression that they are quite common.

(*g*) An inquiry into the *social status* of the family. In many cases the social standing of the family in the community is the determining factor in the life-career motive of the child. For instance, if the student is in that social level in which it is the accepted thing for all young people to go to high school, graduate, and go to college, then any other form of guidance for any individual of that group will be practically useless until they have tried and failed. On the other hand, if the family is socially located among a group of low-grade immigrants who look upon their children as economic assets to be put to work as soon as possible, then any advice of high school graduation or college entrance would probably be useless.

(*h*) The *mental record* of the individual—the record he has made in any intelligence, achievement, aptitude, or prognosis tests. Any record of mental instability or abnormal behavior.

Blanks and forms for collecting and recording this information should be developed.

**4. First Tests.**—(*a*) The *age and grade* of the student as a crude indication of his probable intelligence. If it is the practice in this particular school system to promote over-age pupils regardless of their marks, this judgment will, of course, be useless.

(*b*) The determination of the *I.Q.* of the individual. This may be discovered by a group test or by an individual test. All intelligence work should be done by group tests wherever possible, the persons making low scores being given supplementary individual tests.

(*c*) *Special abilities or special disabilities*, such as disabilities in spelling and in mathematics, or special abilities in shop work, music, or drawing.

(*d*) The *discovery of aptitudes*—aptitudes for music or for art, clerical aptitudes, mechanical aptitudes, visual imagery, audile imagery, analyzing ability, manipulative ability.

(*e*) *Educational attainments* or special qualifications. The discovery of any special educational qualifications which the individual may possess, such as two or three consecutive years in higher mathematics, two or three consecutive years with high marks in English, consecutive years and high marks in drawing, etc.

(*f*) *Marketable skills*, whether obtained in school or outside of school, such as in radio work, basketry, dressmaking, automobile repair, ability to drive an automobile, typewriting, penmanship, foreign languages, electrical work, etc.

(*g*) *Vacation or Part-time Jobs.*—What has the individual done in vacation work or part-time work that might be valuable? This may be developed into the possession of certain skills, or specific likes or dislikes. Along with this should be included a record of after-school jobs. Has any work been done after school, Saturdays, or just before Christmas? What influence has it had upon the individual? His interests, likes, dislikes, special skills, or knowledge acquired?

(*h*) Finally, a study of the *expressed interests of the student.* The writer believes it a mistake to attribute great importance to these interests, especially during the adolescent period. They are changeable, unstable, and easily influenced by casual contacts, as evidenced by Willett's study.[1]

**5. Advisement.**—Unfortunately many people have the idea that guidance or advisement can be done in one interview—once and for all. This seems to the writer to be a serious error. It is not possible to guide youth once and for all. It is a process that in most cases has to be repeated at regular intervals up to the age of at least 20. Few individuals start out on a predetermined life career at, say, the ages of 12 to 14 or 16 and remain in that line of activity until maturity and old age.

The first advice given by the vocational counselor is always more or less tentative, and in the nature of an experiment, except in the comparatively few clean-cut cases. In the process of this advisement the foregoing 16 points should be kept in mind and used as a basis for the advisement.

In some cases the adviser can be quite definite and precise in the advice given, as for a student with low I.Q. or some severe disability. In other cases it should be explained to the one being advised that the advisement is tentative, with possible readjustments to come later. An accurate record should be kept of all advice given.

This advice may be of many different kinds. It may be encouragement to return to school, to the same course, and work a little harder. It may be advice with arrangements for transfer to another course, another school, another teacher. It may be advice and help in getting part-time work or vacation work. It may be a suggestion to try out certain courses. It may be a readjustment of courses and subjects for college entrance. It may be advice to enter a certain vocation and the securing of a position in that vocation. Or it may be to enter a definite training course in vocational education for the purpose of securing the necessary skills for entrance to some vocation.

**6. Placement.**—Probably 80 per cent of the so-called guidance in our public schools at the present time consists primarily of placement, and the larger part of this job getting is without the slightest element of guidance. Its main element is chance. A boy walks into the school "guidance" office with the request to be found a job. A check-up is made of the jobs open, and he is put into contact with one or more of them, the whole process being largely that of chance—that particular student happened to go in when that particular job was open. Placement is merely one element in the entire guidance system, and should not be over-emphasized to the exclusion of the other elements of the guidance system. It is the epilogue of the guidance system, not the prologue. Under placement the following points need to be considered:

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[1] See p. 109.

(*a*) The securing of a *work permit or employment certificate*, now necessary in the majority of northern and eastern states.

(*b*) The issuance of a work permit is or should be contingent upon a *written promise of employment* from the employer.

(*c*) The effect of *child labor laws* upon that particular child and that particular job. This would cover forbidden occupations, machinery, hours, hazardous employment, minimum-wage laws, etc.

(*d*) *Entrance to the Part-time Continuation Schools.*—In most of the states between the ages 14 and 16 and in some states 14 and 17 and 18, no child is allowed to leave school and enter upon employment without immediately entering the continuation school.[2] If the student is between the age limits specified for attendance upon the continuation school, then part of the process of placement should be registration in the continuation school. If this is not the case, then the student should be advised to enter some specific evening school class or classes.

(*e*) *Union Regulations.*—Some unions have regulations which tend to restrict in some form or other entrance of juveniles in certain trades. These vary greatly in certain localities and in certain occupations. In some cases the applicant must be a relative of a worker in that trade. In others, he must be of certain nationalities, a certain age, have attained a certain school grade, or have graduated from a prescribed training course.

(*f*) *Apprenticeship regulations*, as established by either the unions, the employers, or the state (as in Wisconsin).

**7. Supervision on the Job.**—The writer is not aware of any guidance system that includes a thoroughgoing systematic system of supervision on the job. There is no question, however, but that this will develop in the near future. (See recent legislation in Utah.) By this is meant supervision and control of the progress of the individual during employment.

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[2] See PAYNE, ARTHUR F., *Administration of Vocational Education*, McGraw-Hill Book Company, Inc., N. Y., 1926, pp. 252–255, for table showing the requirements of all the states.

There are many "juvenile," "boxed-in," or so-called "blind-alley" jobs, which are all right for young people so long as they do not stay at that same job for too long a time. These jobs offer few possibilities for progress in themselves. The only way to progress is to quit and get another job of a higher grade. Within certain limits there are possibilities within these jobs, and these possibilities can best be developed if there is an agreement with the employer that a worker shall stay on one job, say, three months, then shall be transferred to a higher job, while another worker is placed on the first job. In this field the following must be kept in mind:

(*a*) It should be done by *agreement* with the employer as a part return for the service of placement rendered without charge.

(*b*) A system of *reports* from the employer and from the employee, checked up by personal visits and inspections whenever necessary.

(*c*) A *rate of promotion* should be established. This should be in terms of the length of time on the job, the degree of success, the wages paid, and the behavior of the individual worker.

(*d*) There should be in each place of employment a *sequence of promotion*, that is, one job should be for beginners, another job should be the next step, and still others the third step, and so on.

This whole process should be one of readjustment and replacement in terms of the individual's development, new abilities or disabilities discovered, toward the dual end of the greatest development of the individual and the greatest service to society as represented by the individual, the employer, and the job.

## A GUIDANCE PRESCRIPTION SCHEDULE

Just as the physician makes a diagnosis by examinations and tests and collects information from all sorts of sources, finally giving a prescription which he is sometimes sure will cure but, which is often in the nature of a try-out, so should the guidance worker, after the diagnosis and classification, give a prescription.

The following guidance prescription schedule provides not only for the recording of the advice given but also for a record of how much of it is fulfilled and when it was followed. This furnishes a stimulus for the advisee and also a means of checking for the adviser.

## CHART 20.—GUIDANCE PRESCRIPTION SCHEDULE

**NAME**.................. **ADDRESS**...................... **FILE NO**.............

**TO RETURN**............................ **ADVISER**....................

Periods of Time—Weeks, Months, or Years
(Cross out two)

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **EDUCATION**...... | Academic.............. | | | | | | | | | | |
| | Accomplished......... | | | | | | | | | | |
| | Try-outs.............. | | | | | | | | | | |
| | Accomplished......... | | | | | | | | | | |
| | Vocational............ | | | | | | | | | | |
| | Accomplished......... | | | | | | | | | | |
| **EMPLOYMENT**.... | Remain in present....... | | | | | | | | | | |
| | Accomplished......... | | | | | | | | | | |
| | Part-time.............. | | | | | | | | | | |
| | Accomplished......... | | | | | | | | | | |
| | Vacation.............. | | | | | | | | | | |
| | Accomplished......... | | | | | | | | | | |
| | Employment........... | | | | | | | | | | |
| | Accomplished......... | | | | | | | | | | |
| | Evening............... | | | | | | | | | | |
| | Accomplished......... | | | | | | | | | | |
| | New Position.......... | | | | | | | | | | |
| | Accomplished......... | | | | | | | | | | |
| | New Work............. | | | | | | | | | | |
| | Accomplished......... | | | | | | | | | | |
| **FINANCE**........ | Savings............... | | | | | | | | | | |
| | Accomplished......... | | | | | | | | | | |
| | Loans................. | | | | | | | | | | |
| | Accomplished......... | | | | | | | | | | |
| | Scholarships........... | | | | | | | | | | |
| | Accomplished......... | | | | | | | | | | |
| **EXAMINATIONS**... | Educational Achievements | | | | | | | | | | |
| | Accomplished......... | | | | | | | | | | |
| | Intelligence............ | | | | | | | | | | |
| | Accomplished......... | | | | | | | | | | |
| | Psychopathic.......... | | | | | | | | | | |
| | Accomplished......... | | | | | | | | | | |
| | Physical............... | | | | | | | | | | |
| | Accomplished......... | | | | | | | | | | |
| | Aptitudes.............. | | | | | | | | | | |
| | Accomplished......... | | | | | | | | | | |
| **EXTRA-CURRICULA ACTIVITIES.** | Social................. | | | | | | | | | | |
| | Accomplished......... | | | | | | | | | | |
| | Athletic............... | | | | | | | | | | |
| | Accomplished......... | | | | | | | | | | |
| | Recreation............. | | | | | | | | | | |
| | Accomplished......... | | | | | | | | | | |
| | Service................ | | | | | | | | | | |
| | Accomplished......... | | | | | | | | | | |
| **CHANGES IN ENVIRONMENT.** | Home.................. | | | | | | | | | | |
| | Accomplished......... | | | | | | | | | | |
| | School................ | | | | | | | | | | |
| | Accomplished......... | | | | | | | | | | |
| | Associates............. | | | | | | | | | | |
| | Accomplished......... | | | | | | | | | | |
| **HABITS AND ATTITUDES.** | Physical............... | | | | | | | | | | |
| | Accomplished......... | | | | | | | | | | |
| | Diet................... | | | | | | | | | | |
| | Accomplished......... | | | | | | | | | | |
| | Mental................ | | | | | | | | | | |
| | Accomplished......... | | | | | | | | | | |
| | Moral................. | | | | | | | | | | |
| | Accomplished......... | | | | | | | | | | |
| | Mannerisms............ | | | | | | | | | | |
| | Accomplished......... | | | | | | | | | | |
| | Dress................. | | | | | | | | | | |
| | Accomplished......... | | | | | | | | | | |

I hereby promise on my honor that I will do my very best to follow in all respects the schedule outlined above.

**DATE**........................

**SIGNED**........................
Advisee

## FORMS AND RECORDS[3]

The question of blanks, records, and forms is an important matter, and one about which it is difficult to give precise information. In general, no two schools or guidance systems will need or can use the same set of blanks and forms. A general analysis of the situation, however, will show that the types of information that should be recorded may be classified under five heads. These are as follows:

1. **Records which the students should bring** to the vocational guidance office when they first present themselves for diagnosis, advice, classification, or readjustment. The vocational guidance director in organizing the system may adopt either one of two methods: (1) He may draft cards or blanks, and send a supply to each principal in each school. Then when students are sent to avail themselves of the services of the vocational guidance bureau, the information called for may be filled in by the principal, the teacher, or the student under the supervision of the principal or teacher. Or (2) the director may have these blanks prepared and, when a student presents himself at the vocational guidance office, the student may be required to fill out these blanks and forms under the supervision of the guidance personnel. Information that the student cannot furnish can be obtained from the principal of his school by telephone or by mail.

The information that is needed is wide and inclusive in its character and scope. It should include all possible information concerning the student. It should include, so far as is possible, a cumulative record of every phase of the student's individual development and environment that may be significant and of value in diagnosis. Some of the more specific items should be age and grade attainment, achievement records by subjects represented by teachers' marks or scores by standardized achievement tests, the medical record of the student, a statement of his behavior and attitudes, a statement of particular traits, abilities, and characteristics, a record of delinquencies of any kind, and other similar information that might prove of value.

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[3] See RALPH, G. G., *Elements of Record Keeping for Child-helping Organizations*, Russell Sage Foundation, New York, 1915. EATON, J. S., *Record Forms for Vocational Schools*, The World Book Company, Yonkers, N. Y., 1917. STRAYER, G. D. and ENGELHARDT, N. Y., *The Strayer-Engelhardt School Record Series*, C. F. Williams and Sons, Albany, N. Y. *Vocational Guidance Bulletin*, Pittsburgh Public Schools, Pittsburgh, Pa., 1922, p. 123 ff. *Manual of Instruction: Physical and Academic Records of Pupils in the Elementary Schools*, Cincinnati Public Schools, Cincinnati, Ohio, 1919.

It is important that the director of vocational guidance shall secure from the superintendent a ruling that no student shall be allowed to leave the school system until he or she has come to the vocational guidance bureau.

**2. The records and forms necessary for recording the information** needed in the processes of the issuing of an "employment certificate" or "work permit."

In many states these records and forms are standardized, printed and distributed by the State Department of Education or the State Department of Labor. *It is important that the issuing of employment certificates shall be a function of the vocational guidance office.* Quite generally one of the requirements for the issuing of an employment certificate is a *physical examination.* It should be accepted as fundamental that no student under 16 years of age should be allowed to go to work without a physical examination. Generally, the issuance of an employment certificate or work permit is based upon the securing of a job. If such is the case, it will be necessary to have a form for a *promise of employment* to be filled out by the employer. If the student has not obtained the position, it will be necessary to have a form that can be used, introducing the student to a possible employer, so that the student may have the way open for him to secure a position.

In many states the issuance of an employment certificate is dependent upon attendance at the continuation school. In such case it will be necessary to have a form that should be sent to the continuation school principal that should amount to the *registration of the student in the continuation school.*

**3.** Under this heading we need records and forms for *recording the data used in advising the pupil and the advice given.* A blank should be drafted for recording information concerning the results of any *psychological tests* given to the student, either in the guidance office or if the student is to be referred to a psychologist or a psychological clinic. A separate blank is needed for recording the results of any *special-ability or aptitude tests.* A separate blank should be developed for recording any *vocational skills* possessed by the student or the results of any vocational tests that might be given him. Finally, a form should be drawn for the specific advice given, by whom given, and when given.[4]

**4. Records of Placement.**—Placement should be conceived as being of two kinds—educational placement, where the individual is placed in a different school or in a special course, such as a vocational school, opportunity classes, try-out courses, etc.; and work placement, where the individual is actually placed on a job. A form should be drafted that can be used as a record of placement, whether that placement is educational placement or work placement. In either case all the details should be recorded on this form.

**5. Records of Follow-up and Employment Supervision.**—One of the important parts of any complete educational guidance scheme is that of follow-up or employment supervision. It is necessary that these records be kept for three purposes, the first being so that reguidance and replacement and adjustments may be effected whenever necessary; the second, so as to check up on the results of the guidance and to test its validity; the third, so that information may be obtained that may be of value in reorganizing the curriculum of the public schools, the establishment of special classes, the segregation of certain groups into certain classes, etc.; the fourth, for the purpose of obtaining accurate vocational information concerning the possibilities of certain jobs, opportunities for promotion, conditions of work, etc.

A wide variety of samples of records and forms may easily be secured by writing to the guidance departments of any of our large cities. These forms should then be studied and modified to suit the exigencies of the particular situation in which the forms are needed.

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[4] See p. 197, this chapter.

## CHAPTER XIII

# THE ADMINISTRATIVE RELATIONSHIPS OF THE GUIDANCE SYSTEM

It is necessary that the organizer of a guidance system, as well as the administrator of the system after it has been organized, should keep clearly in mind the administrative relationships of such a system. This topic has been approached from a different point of view in Chapter XIV. But it is of such importance that it has been thought best to attack the problem more definitely and from a slightly different angle.

The administrative relationships of the guidance system may be classified under two main heads:

I. Within the school system.
II. Outside the school system.

### I. WITHIN THE SCHOOL SYSTEM

**1. Various Units of the School System.**—It is difficult to say which of these relationships is the most important. The one that will first come to mind, however, will be the relationship of the guidance system to the various units of the school system and to the curricula of the various schools in this system.

The outlining of this relationship is no easy task. It involves the question of whether the curricula as at present organized have definitely established, accepted and recognized objectives; whether the material within these various curricula is such that it lends itself to the attainment of the stated objectives; whether the particular methods of teaching used assist in the attainment of these objectives; whether these curricula objectives are logical and legitimate in terms of the discovered needs of the community, of case groups of students, and of individual students.

**2. The success or failure of case groups of students and individual students in certain subjects and courses of the curriculum is involved;** also the drawing and holding power of certain courses and subjects, and, more particularly, the records of the individual students in certain subjects, or certain groups of subjects.

Some students do quite well in the abstract subjects; some in the linguistic subjects; some in the practical and concrete studies; others in the aesthetic.. Some students do not do well in any particular group of subjects, but do well in extra-classroom activities and in the social life of the school. A few rare students seem to do well in all phases of school work, and some do mediocre work in every type of school activity.

This individual record of the success or the failure of the student to perform the tasks set and to meet the standards and the requirements of the subjects and courses of the various curricula is of the utmost importance in vocational guidance. What it really amounts to is a record of a wide variety of try-out courses and experiences covering a considerable period of time.

**3. The success or the failure of the student in extra-classroom activities** is the next in order, and includes all forms of clubs and societies, such as social, dramatic, musical, literary, debating, and departmental clubs, school publications, plays, pageants, excursions, celebrations of special days, honor societies, assemblies, athletic teams and sports, class organizations, Boy Scouts, Girl Scouts, Campfire Girls, Woodcraft League, Junior Red Cross, etc.[1] The strength of this relationship of the individual student to these extra-classroom activities may be measured by ascertaining the number of memberships the student holds, whether he partakes in the active organization and government of one or more, such as membership of committees, chairmanship of committees, offices held and type of office, etc.

**4. Standardized records should be kept** of the participation of each student in athletics or sports as well as in such forms of recreation as chess and checker clubs, paint and pencil clubs, etc. It is of the utmost value to a guidance adviser to know that student A belongs to the musical club, the camera club, and the nature study club, does well in the fine arts department, that he has never played football, basketball, or baseball, but does occasionally play tennis, goes on long hikes, is a checker champion, and has just taken up the study of chess. On the other hand, student B has been a member of the football team for three years, has won his athletic letter in the three major sports of football, baseball, basketball, and makes a better grade in shop work, mechanical drawing, and chemistry than in any of his other studies.

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[1] See p. 155 for list of extra-curricula organizations in New York City High Schools.

**5. The visiting teacher**[2] as a new type of service in education is an important unit in a complete guidance system. This teacher is of great value in follow-up work and in the investigation of special cases that have been developed by the ordinary school routine, and also as a discoverer of the facts and situations that explain many abnormalities of conduct, attitude, and reactions of any particular student. No guidance system can be considered as 100 per cent complete without having one or more visiting teachers either on its staff or working in close cooperation with it.

**6. The psychological clinic** and the service which it renders to the community and to the school have now become standardized and generally accepted. It is quite probable that within the next few years every school system, whether large or small, will have some form of psychological clinic or at least the services of a psychologist and possibly a psychiatrist on whole or part time as a part of its system. In the large cities this will be a regularly organized psychological clinic with suites of rooms, the latest and most scientific apparatus, and a staff of trained and expert specialists. In the small cities it may consist only of the whole or part-time services of some teacher who has taken one or more courses in psychological testing, perhaps during a sabbatical year, or in summer school classes. The services of a trained psychologist are of the utmost importance in any well-organized vocational guidance system.

**7. The Department of Attendance, Research, and Statistics.**—With the growth of the scientific method of education there has developed a feeling of need for research, for the keeping of adequate records of various kinds, and for the statistical treatment and interpretation of data of all kinds. In some large cities there is a regular department or division that has full and complete charge of all attendance records, all research work, and all statistics.

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[2] See *The Visiting Teacher:* A Survey by the National Association of Visiting Teachers and Home and School Visitors, Public Education Association, New York, 1923. Also OPPENHEIMER, J. J., *The Visiting Teacher Movement*, Public Education Association, New York, 1924. Also GLEIM, S. C., "The Visiting Teacher," *Bull.*, No. 10, U. S. Bureau of Education, Washington, D. C., 1921.

Our colleges and universities are developing expert workers in this field, and superintendents are developing a strong sense of the value of the work of such experts. In small cities, and even in some of the larger ones, the attendance department is separated from the department of research or statistics. In some cases there is only the attendance department, and any research work or statistical study is done by principals, department heads, and individual teachers in a sporadic and casual fashion. Such a department, however it is organized, can be of real service to the guidance adviser, and, if it is not actually a part of the guidance system, the two should be closely related.

**8. The Medical Department, Physical Examination, School Nurses, Visiting Nurses.**—In any guidance system some person should be available to whom the guidance adviser may send certain case groups of students or individual students for special physical and health examinations. Some of the larger school systems have a regularly organized medical department; some of the smaller cities have the part-time services of a physician; and the still smaller towns and villages have made arrangements whereby students may be sent to the office of a physician as occasion requires. The school nurses and visiting nurses can contribute services and information of great value to the guidance work in the public school in follow-up work with the students and in the homes.

**9. The Coordinator.**—In some of the more progressive cities *a new educational officer* has been developed. This officer who really is a liaison officer between school and vocation, is called a coordinator.[3] This particular function was first developed in the cooperative courses where the students, arranged in pairs, worked half time in school and half time at the vocation. The time spent on the job may be in factories, offices, stores, or hospitals. The particular function of the coordinator in such courses was to coordinate and correlate the work of the school with the necessities and requirements of the job.

Many part-time general continuation schools have coordinators on either a full-time or part-time basis. The possibilities of the coordinator's job in education or guidance have not as yet been fully realized. Such a liaison officer can contribute materially to the work and functioning of a guidance system.

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[3] See PAYNE, A. F., *Administration of Vocational Education*, McGraw-Hill Book Company, Inc., New York, 1924, pp. 216 ff., p. 246. See also page 175 this volume.

**10. Vocational Education.**—This department and vocational guidance should be closely related. No student should be allowed to enter any strictly vocational education course until he has passed through the vocational guidance system. This requirement should be made not for the purpose of changing any preconceived choice he has made, but for checking up on his choice; assisting him in making a more definite choice; keeping a record of his capacities and abilities; ascertaining the reasons for making this particular choice; and checking the results of the advice, with his success or failure in the course chosen; and to aid in the more precise functioning of vocational courses.

No vocational guidance counselor should ever attempt to impose his choice or advice upon any student. No matter how nearly perfect the system, or how clean-cut any case may be, the student should always be allowed the right to reject wholly or in part any or all advice given, unless his choice conflicts with any of the school regulations or school discipline.[4] If a student insists on going contrary to the advice given in the guidance department, it is then the duty of that department, through its counselors, to assist the student, as far as possible, to realize his own ambitions, and to stand ready, as far as they are able, to make readjustments and give reguidance as the need arises.

Before a student enters upon any definite vocational course, he is supposed to have chosen that course for good and sufficient reasons, and on the basis of scientific information regarding his own possibilities and capabilities, and the requirements and limitations of that vocation. If the guidance function has been well performed, there should generally be no necessity for readjustments, but in many cases readjustments and reguidance will be necessary.

**11. Prevocational Education, Try-out Courses, and Trade-finding Classes.**—These classes and courses should be considered as integral parts of a complete vocational guidance system. It is to be hoped that the present limitations of try-out courses will soon be expanded from those of merely industrial arts shop work to try-out courses in household arts, commercial work, fine arts, music, modern languages, mathematics, science, etc.

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[4] BLACKMAN, F. W., *Justifiable Individualism*, Thomas Y. Crowell & Company, New York, 1922. THORNDIKE, E. L., *Individuality*, Houghton Mifflin Company, New York, 1911.

The try-out function in the junior high school is at present largely limited to work in the shops. In view of the large number of possible vocations, approximately 17,000, and the number of vocations now actually taught in the schools of this country, now numbering nearly 500, the limitations of the try-out shops in our junior high schools, as at present organized, are so narrow as to appear ridiculous. Even in the best of our schools the so-called try-out courses should only be considered as functioning as negative guidance.

The practical-work courses in the continuation schools have a peculiarly valuable function as part of a vocational guidance system. It is particularly necessary that those unformed and uninformed youth who intend to leave or have left the regular school as soon as the law allows, should be given some opportunity to discover, develop, and try out their vocational capacities and aptitudes. This theory is, of course, based upon the assumption that these continuation school practical courses are much richer than the ordinary manual training courses.

**12. The Departments of Industrial Arts, Household Arts, Commercial Arts, Fine Arts, and Music.**—From the standpoint of vocational guidance and prevocational education, all the work and courses of these departments may be and should be looked upon as having a large measure of try-out and prevocational values. In some cases the later experience of the pupil will prove that these courses have been of decided vocational value, but these cases will be so rare that they cannot be used as a basis for justification of curriculum changes or objectives.

## II. OUTSIDE THE SCHOOL SYSTEM

Each director of vocational guidance and every vocational guidance adviser should be given freedom and opportunity—in fact, should be required to establish and maintain contacts outside of the public school. For the adviser, it is a good plan to make this a part of the regular daily or weekly program. Records should be kept and reports made on the contacts established. These contacts may be along the following lines:

**1. Relationships with Individual Employment Managers.**—With the increase of the scientific management idea and ideal in business and industry, a new specialist has developed whose function it is to select, hire, and place the personnel of the organization. These persons are sometimes called employment managers, labor managers, directors of personnel, and other similar titles. The vocational guidance adviser or director can get much valuable information from these people, and, in return, can perform a valuable service for them. In almost all of our larger cities and towns the employment managers are organized into some form of club or association.[5] It should be a definite function of the director of vocational guidance to establish and maintain contacts with these organizations, cooperating with them in their activities and rendering service as occasions offer.

**2. Employment Offices, Agencies, and Bureaus.**—These agencies and bureaus, on analysis, will be found to fall into three main groups as follows:

(*a*) Federal and State.
(*b*) Private-profit agencies
(*c*) Philanthropic agencies.

### *a.* FEDERAL AND STATE EMPLOYMENT AGENCIES

This type of agency does not, as a general rule, handle or place either juvenile (except U. S. Junior Employment Service), highly skilled, or (except in special offices) female labor. At the present time there are approximately 209 local offices established in 41 states. Their clientele is made up mostly of the rough-skilled trades, the semi-skilled, and the so-called unskilled labor. Contact should be established with these agencies, but no great interchange of service will be possible.

The administration of the United States Employment Service as a distinct and separate unit of the Department of Labor was inaugurated under an order promulgated January 3, 1918, of an Act approved October 6, 1917. Previous thereto, the employment service functioned under authority of an Act to establish a division of information in the Bureau of Immigration (Sec. 40, Immigration Act of February 20, 1907) and by the provisions of the organic Act creating the Department of Labor (March 4, 1913).

The purposes of the United States Employment Service, as defined by the language of the appropriation Act, are:

1. *To foster, promote, and develop the welfare of the wage earners of the United States,* including juniors legally employed.

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[5] The national organization is the American Management Association, 20 Vesey Street, New York City.

2. *To improve their working conditions.*
3. *To advance their opportunities for profitable employment,* by regularly collecting, furnishing, and publishing employment information as to opportunities for employment.
4. Maintaining a system for clearing labor between the several States.
5. Cooperating with and coordinating the public employment offices throughout the country.

The words italicized are also found in the organic Act creating the Department of Labor and defining its purposes.

Its primary function is to bring together the jobless man and the manless job.

### *b.* PRIVATE-PROFIT AGENCIES

The sole purpose of these agencies is to make a profit to the owners and managers. Fees are charged the worker and sometimes the employer for the service rendered. The fee charged the worker is sometimes a certain percentage of the salary or wage, sometimes a flat fee. The usual custom is to charge skilled workers a percentage of the wage and unskilled workers a flat fee.

These private agencies usually specialize. Some specialize in office workers, stenographers, typists, bookkeepers, and clerical help; others specialize in college and technical school graduates; others in farm hands, railroad section hands, and lumbermen; others in personal and domestic service, such as cooks, waitresses, household workers. In this specialized group we also have the agency run by an associated group of employers who are engaged in operations along similar lines, and who establish and maintain a central agency for the hiring of workers. This type of agency employs all ages and grades of workers.

### *c.* PHILANTHROPIC AGENCIES

These agencies are also specialized in the type of worker that they can place. This specialization is not done designedly, but is enforced by the nature of the organization.

In this group is the Y. M. C. A., which specializes in the placement of young men from the ages of 18 to 30 who have slight, if any, training. These young men are not, as a rule, tradesmen, but are fairly well educated and often have considerable experience in clerical work, salesmanship, and drafting positions. The

Y. M. C. A. usually charges a small fee for the service rendered, and makes a fine cooperating agency for a vocational guidance system as run by the public schools.

Similarly, there is the Y. W. C. A., which specializes in the placement of young women with a wide variety of training, education, and experience, and places applicants in a fairly wide field of endeavor, ranging from restaurant waitresses to factory workers and private secretaries. One of the valuable features of the Y. W. C. A. service is that all the positions in which they place young women are investigated by trained investigators.

**Settlement houses** usually have some kind of placement activity. The type of help which they can place is usually not very high-class, but they can often furnish positions for workers with little skill, training, or education, for short-period jobs.

**The Salvation Army and the Associated Charities** also place workers, but the service they can render to the vocational guidance department of a public school system is hardly more than a sympathetic interest and a cooperative attitude.

**Workers' Unions and Associations.**—Quite generally, unions and workers' associations have some form of employment service. Contact should be established and maintained with the people in charge of this service. In some cities and in some unions the relationship will be helpful to both parties, and in other places the service rendered, by the very nature of the case, will be comparatively slight.

**Alumni and Former Students Who Are Now Employed.**—The vocational guidance system should keep in contact, by means of postal cards, reports, conferences, or visits, with students who have been placed, in order to check up on the guidance and develop information and data of value. Printed report cards, requests for information, or questionnaires should be sent to these beneficiaries of the guidance and placement system. When making these contacts there should always be some opportunity for them to indicate the possibility of positions being open that might be filled by the placement division of the vocational guidance system.

**The individual foremen or forewomen** who have received workers from the placement division of the guidance system are also good people with whom to establish contacts and methods of cooperation. They are usually the first people to know of possibilities for placing workers, and as a general thing, they take considerable pleasure and pride in cooperating with the placement officers of the public school system, if they are approached in the right manner.

**3. The United States Junior Employment Service.**—This is the junior division of the United States Employment Service and is organized as a specialized department under that division in the United States Department of Labor, Washington, D. C. This Junior Employment Service was organized during the World War and at present has established and given financial aid to offices in 22 cities in 13 states. A list of these offices follows:

UNITED STATES EMPLOYMENT SERVICE

Junior Division

Guidance and placement offices

In writing to local Junior cooperating offices, address "Superintendent. Guidance and Placement."

*California*

Chico, Part-time Department, Chico High School.
Los Angeles, 706 Security Building.
Oakland, 1208 Myrtle Street.
San Diego, Senior High School.
Stockton, 517 East Market Street.

*Delaware*

Wilmington, Municipal Building.

*Georgia*

Atlanta, 507 Chamber of Commerce Building (white); 146 North Butler Street (colored).

*Illinois*

Rockford, Board of Education Building.

*Indiana*

Gary, 405 Broadway.
Richmond, High School Building.
South Bend, School Administration Building.

*Massachusetts*

Pittsfield, Municipal Building, Dunham Street.
Worcester, 14 City Hall.

*Michigan*

Jackson, 116 West Wesley Street.

*Minnesota*

Minneapolis, 407 City Hall.
St. Paul, St. Paul Association Offices, Fourth and Cedar Streets.

*New Jersey*

Jersey City, 571 Jersey Avenue.

*Pennsylvania*

Pittsburgh, 404 Nixon Building.

*Rhode Island*

Providence, 9 Exchange Terrace.

*Utah*

Salt Lake City, 425 Atlas Block.

*Wisconsin*

Green Bay, Vocational School.
Milwaukee, 809 Manufacturers' Home Building.

The central administrative office at Washington, D. C., furnishes aid in organization and administration of field offices, provides them with standardized blanks and forms, and compiles statistics from and for them. *It issues a bimonthly News-Letter and a series of Field Studies* which give back to the whole field of vocational guidance and placement the results of the experimentation in these offices.

**Field Offices.**—These field offices are established in cooperation with the public schools or with other agencies, state or city, which have in charge the interests of working boys and girls.

These offices afford experiment stations where problems affecting working juniors can be studied. They follow a more or less uniform procedure, which insures a careful interview for every applicant, close attention of a skilled counselor to his particular case, *an attempt at both educational and vocational guidance*, placement with a view to his ultimate best adjustment as a citizen and a worker, and a careful follow-up and check on the results of that placement. Reports covering in detail the field-office activities are sent each week to the administrative office.

*The Junior Division of the United States Employment Service* was created by order of the Director General, December 6, 1918. Officially, it was the direct outcome of the Boys' Working Reserve, a branch of the United States Employment Service established as a war emergency service charged with the mobilization and placement of boys between the ages of 16 and 21 in civilian war work, in the beginning chiefly agricultural, since it was concerned primarily with the problem of helping maintain food production. Economic necessity or the lure of high wages caused an increased number of boys to leave school, and even their homes, to enter industry. These positions were often unsuited to future advancement, and only a small proportion of the boy workers ever returned to school. Plans were put into effect to deal constructively with this situation, and it was arranged to place in each of the larger employment offices a special enrolment officer known as the Junior Counselor, to whom all boy applicants were referred. This official centered his effort upon persuading the boys to return to or remain at school, or, if this were not possible, to find him suitable employment, with an eye to his future career.[6]

The end of the war brought an end to this emergency service. Its vision and policy clearly foreshadowed a permanent national service which would meet not only the exigencies of the reconstruction period, but the continuous needs of juniors entering the occupational world. Many agencies, educational, religious, philanthropic, had for a number of years given more or less attention to the vocational guidance and placement of youth. All these general influences no doubt entered into the establishment of the Junior Division, which took the place of the Boy's Working Reserve in the United States Employment Service, and was charged with the guidance and placement of boys and girls under 21 years of age. Its work is done in cooperation with public schools and other agencies interested in junior problems.

Field offices receive from the national office the use of the frank for all work connected with placement, Federal blanks and forms for office records, news letters and bulletins, and advice in organization and administration. In addition, *Federal financial aid may be extended, varying from a small portion of the salary of a placement officer to part or whole salaries of several officers.* The amount of this aid is determined by the possibilities of the Junior Division budget and the conditions governing the local office. The policy of the Junior Division is to afford financial aid in cases where the local experiment promises a definite contribution to the problems of junior guidance and placement and where the office could not be established without this aid. The procedure is to withdraw financial support in whole or in part as rapidly as the office is able to become wholly autonomous. A few offices, regarded as permanent training and experiment centers, receive continued aid in consideration of special services.

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[6] See Annual Report of the Secretary of Labor for the Fiscal Year Ended June 30, 1918, pp. 211–212.

The Junior Division cooperates with schools, and other interested agencies, in establishing and maintaining employment offices, open to all juniors over the legal working age and under 21. The extent of the Federal aid afforded these local offices is determined by circumstances, and varies rather widely, depending upon their needs and the contribution which they may, in turn, be expected to make; for offices of this sort, definitely committed to the policy of careful consultation regarding the needs of the applicant, of wise placement, and of consistent follow-up after placement, are so comparatively recent a development that each office is regarded in the light of an experiment station and is expected to contribute to the sum of information regarding technique and method. The Federal office in Washington compiles and interprets information, supervises experimentation, and offers itself as a clearing house of results.

*The Federal Junior Employment Service has two obvious functions* in the field of junior guidance and placement:

1. To collect and make available for general use reliable information on junior employment in its relation to the public schools and the occupational world; and
2. To organize and conduct placement offices for the vocational guidance and placement of boys and girls between the legal working age and 21 years.

The Junior Division functions through cooperation with the public employment services of the several states, with local school systems, and with other agencies. It helps to establish and maintain a limited number of placement offices in sections where local educational and occupational conditions are especially favorable to the development of the work. These local offices serve (1) as junior employment bureaus in their respective cities, and (2) as experimental stations where fundamental and specific junior placement problems can be worked out by a trained personnel, and where information can be collected and made available to the whole country.[7]

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[7] See Annual Report of the Secretary of Labor for the Fiscal Year Ended June 30, 1923.

> *In brief, the local offices bring first aid to the young wage earner in his difficult passage from school to work and gather information vital to him in his relation to the public schools and the occupational world; the national office makes this information available to educator and employer alike, who recognize a mutual responsibility to the young worker as a potential citizen.*
>
> The Junior Division of the United States Employment Service is the agency established by the Federal Government for the purpose of experimental work along these lines. We take it that merely getting a job for a junior which is probably no better than that junior would be able ultimately to get for himself, and then forgetting all about him until in the course of events he shows up for another job of the same sort, is in no sense professional or educational work, and that the responsibility of the state and society toward the junior is in no way fulfilled by such a service. On the other hand, we think that the placement office cooperating with the school authorities should establish a supervision over the working junior, whether he be in part-time school or released for full-time work in industry, which is still an education with as clearly defined professional and social and ethical aims as any high school curriculum.[8]
>
> Junior placement work, as a necessary part of vocational guidance programs, and as a definite responsibility of the state toward the three million juniors annually entering the occupational world, is fast winning recognition and support. To foster it until such time as it is a nationally established thing is the task of the Junior Division of the United States Employment Service, in the Department of Labor.[9]

It is of the utmost importance that the director of the vocational guidance service establish relationships with this service through the Federal Director in charge of the work, who may be addressed at Washington, D. C.

**4. The semi-social, semi-philanthropic organizations** of business men, such as the *Rotary Clubs*, *Kiwanis Clubs*, *Lions*, and *Big Brothers*, are always willing to assist in putting over any program of guidance or placement of young men and women, boys and girls. In many cases they will undertake specific functions and activities, accept responsibility for various programs, and quite frequently are willing to finance certain well-outlined projects. The Masonic Order of Knights Templar have just (Sept., 1924) announced the establishment of a scholarship fund for needy students.

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[8] Address by Miss Mary Stewart at the Convention of the National Vocational Guidance Association, Chicago, February 21 to 23, 1924.

[9] For the information and data contained in the above statement we have to thank Miss Mary Stewart, Federal Director of the United States Junior Employment Service.

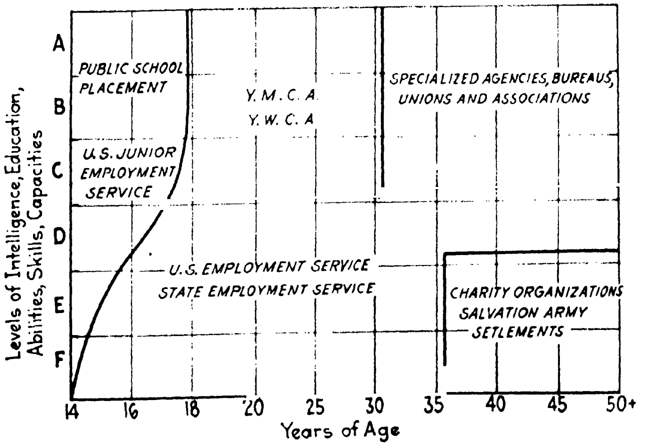
5. **The K. of C., the Y. M. C. A., the Y. M. H. A.** (Hebrew), **the Urban League** (for colored people), and other similar organizations specializing in fields limited by religious or racial affiliations are invariably glad to be of help within their own limited field.

6. **Charity organizations and child welfare organizations** of all kinds are always glad to assist in a general way, but are generally more interested in special cases. The service rendered by these organizations is generally of a reciprocal nature.

The foregoing does not assume to exhaust the field of the administrative relationships of the public school vocational guidance system, but enough has been said to bring to the organizer and the administrator of such systems a realizing sense of the necessity of developing these cooperative relationships as one of the most important functions of his office.

**The Activity Spheres of the Various Placement Agencies.** As has been indicated, one of the most important groups of cooperating agencies for the vocational guidance system consists of the various agencies active in the field of placement. These agencies have already been classified and discussed. Every director of vocational guidance should *make a survey of all these agencies within his community*, and, for a better understanding of their possibilities and limitations, develop a chart somewhat like the following:

Chart 21.—Showing Cooperating Spheres of Various Placement Agencies



On the lower horizontal line of the chart is indicated the ages of the persons whom these placement or employment agencies assist in finding employment. The ages extend from the age of 14, the end of the compulsory school period, to the age of 50 plus. The divisions on the left of the chart, marked *A*, *B*, *C*, *D*, *E*, *F*, are in terms of the probable levels of intelligence, education, abilities, skills, and capacities of the individual.

For instance, the public school placement agencies cover all students of all levels of ability, from the ages of 14 to 18. The Y. M. C. A. and the Y. W. C. A. begin their activities at about the ages of 18 to 30. Their field is also generally limited to the higher levels of intelligence and education.

The special agencies, bureaus, and associations begin at the age of about 18, running up to 50 and over, but limited to the higher levels of ability. The United States Employment Service and the state employment services begin at about the age of 14, running up to 50 and over, but limited to the lower levels of intelligence, skill, and education.

The charity organizations, the Salvation Army, and similar agencies deal mostly with individuals of 35 years of age up to 50 and over, and limited to the lower levels of intelligence, ability and capacity.

This type of survey and chart will show quite readily the importance and the possibilities of cooperating with these agencies in placing the various types of students found in the public schools in the wide variety of jobs and opportunities existing in any community.

The director of vocational guidance, when drafting such a chart, should insert in its proper location the names of the particular agencies, and possibly the names of the managers and the telephone numbers. In the large cities, where the list would be too long, the names might be "keyed" with small colored stickers or colored tacks.

## CHAPTER XIV

# THE FUNCTIONS AND RESPONSIBILITIES OF THE DIRECTOR OF VOCATIONAL GUIDANCE

There is little doubt but that vocational guidance is developing into a highly specialized and technical function, which calls for a specially trained person to perform that function, whether it is found within the public school system, in industry, or in other units of society. It is quite probable that within the next few years we shall have this specialization carried to the point where we shall develop experts in the field of guidance for elementary schools, junior high schools, senior high schools, universities, women's colleges, settlement houses, orphan asylums, Y. M. C. A.'s, reformatories, prisons, hospitals, etc.

The developments of technique in the newer scientific phases of education, such as the development of scales, tests, and other objective measures of the processes, values, and objectives of education, along with the development of a wide variety of scales, tests, and measures, now being developed in the field of applied psychology, justify us in assuming that in the future any form of guidance will rest in the hands of the specially trained expert.

With the development of this special function of guidance and the development of the expert organizer and administrator of this work, we are brought face to face with the difficult problem of just what shall be his (or her) place in the organization of the small town, the medium-sized city, and the large city public school system, the small college, the large college, the university. Just how much authority does he have? Over whom does he exercise this authority? Who is his immediate superior, from whom does he receive orders, to whom does he make reports, and to whom is he generally responsible? Does he work through or cut under the school principals, supervisors, and deans? Can either of these prevent him from discharging his function in the schools or departments of which they are in direct charge? Is he to rank as a supervisor, a director, an assistant superintendent, an associate-superintendent, or an extraneous officer of administration without position, rank, or authority.

This general problem cannot be solved until we make a study of the organization of our school systems as they exist generally at present. Such a study brings to us the following facts:

### THE STANDARD TYPES OF SCHOOL ORGANIZATIONS

There now exist in this country five standard types of school organizations. These are:

1. The line or military type of school organization.
2. The line-and-staff type of school organization.
3. The combination line, staff, and functional type of school organization.
4. The functional type of school organization.
5. The functional-committee type of school organization.

At few points in our educational system do the weaknesses of our administration of education show up quite so sharply as in the organization of the educational systems in our cities and towns. There are many more or less valid reasons and excuses for this situation. The science of business organization and administration has developed rapidly within the past ten years. Educators generally have failed to recognize the relationship between business administration and educational administration, and to keep in touch with developments along this line. It is quite within reason to say that 75 per cent of the bitternesses, controversies, and difficulties in the administration of education in local communities are caused by the lack of a definitely planned and generally understood and accepted form of organization, with definitely outlined lines of authority and cooperation, fields of activities, functions, and responsibilities.[1]

The organization of the educational systems in the large cities, medium-sized towns, and smaller towns and villages may appear to be quite different, but they are nevertheless based upon the same fundamental principles. The functions and responsibilities of the local director of guidance, and the ease with which he discharges them, are almost entirely dependent upon the form of organization of the school system of which he is a part. In the large towns and cities he may rank as an assistant superintendent with a staff of his own, his activities being definitely restricted to the organization and administration of the various forms and phases of life guidance. In some cases he may also supervise the work in practical arts in grammar schools, junior high, and senior high schools. In smaller communities he may be responsible for all forms of vocational education and all the practical arts work, such as household arts, manual training, industrial arts, drawing, and the fine arts, with other responsibilities, such as Americanization classes, evening schools, as well as vocational guidance. In still smaller towns the superintendent himself may, in general, be responsible for the organization, administration, and supervision of all these activities, delegating specific authority and responsibilities to certain persons or groups of persons. But in every case the same principles apply.

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[1] See PAYNE, A. F., *Administration of Vocational Education*, McGraw-Hill Book Company, Inc., New York, 1924, chap. xiv.

Every superintendent of schools is responsible for the drafting of a chart of the public school organization, with the place and responsibility of every person and every activity definitely located thereon. The scientific method in management, as related to internal organization, carefully delegates responsibility, authority, and powers to certain specified persons, and then holds them responsible for results. These responsibilities and powers are delegated only to those especially fitted to receive them.

In general, then, there are five standard types of organization. Some of our educational systems, because of tradition or local circumstances, are firmly organized upon one type. Other communities are going through a process of evolution—certain parts of the system are organized on one type, and other parts on a different one. It is possible to find school systems where certain departments, either administrative or operative, are well organized, while others are quite the reverse. In any case the responsibility is that of the superintendent.[2]

## 1. Line or Military Type of School Organization[3]

Chart 22 shows the simplest and oldest form of organization. This form is a direct outgrowth of the necessity for discipline and obedience to orders wherever large numbers of employees are concerned. It is taken almost intact from the old form of military organization. Julius Caesar, Napoleon Bonaparte, the Duke of Wellington, and other great military leaders all used this form of organization. No specialists or experts are used as consultants or advisers. Each person in the "line" is directly responsible for all phases of the work below him. No one can "cut under him" or "go over his head."

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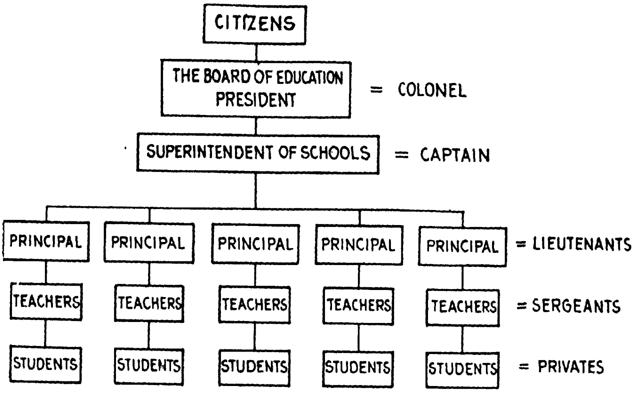
[2] See Cubberly, E. P., *Public School Administration*, Houghton Mifflin Company, Boston, Mass., 1916, chap. xii.

[3] See Kimball, D. S., *Principles of Industrial Organization*, McGraw-Hill Book Company, Inc., New York, 1913, p. 70. Diemer, H., *Industrial Organization and Management*, LaSalle Extension University, Chicago, Ill., 1915, p. 17.

CHART 22 —LINE OR MILITARY TYPE OF SCHOOL ORGANIZATION

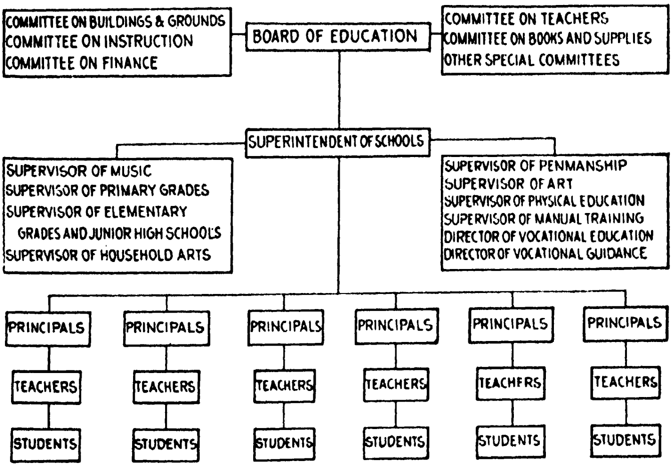


This type is most common in the small towns, the line of authority running directly from the Board of Education to the superintendent of schools, and from him to the principals of the various grammar, junior high, and senior high schools, each principal being in charge of all activities within his particular school. The teachers are responsible to him and receive instructions from him. This is called a line organization because the line of authority runs straight down the line from the highest to the lowest unit. It is also called the military type of organization because it is based upon the old form of military organization, the students representing the privates in the ranks, the teachers representing the sergeants, the principals the lieutenants, and the superintendent the captain, with the president of the Board of Education as the colonel.

## 2. Line-and-staff Type of School Organization[4]

As the military organization developed, specialists were introduced who acted in an advisory capacity to the commanding officers. As Caesar, Napoleon, and Wellington employed the principle of "line" organization, so it was Bismarck and Von Moltke who developed and added to the "line" organization the "staff" of experts and specialists. In the field of business and factory organization we find an exact analogy to this development of the military organization. Experts and specialists collect data and assist in forming judgments and establishing policies. They make recommendations to their chief, who issues orders through the line organization. Sometimes each department executive has his own small staff of experts who assist and advise him in the work of his special field.

Chart 23.—Line-and-staff Type of School Organization


COMMITTEE ON BUILDINGS & GROUNDS
COMMITTEE ON INSTRUCTION
COMMITTEE ON FINANCE
BOARD OF EDUCATION
COMMITTEE ON TEACHERS
COMMITTEE ON BOOKS AND SUPPLIES
OTHER SPECIAL COMMITTEES
SUPERINTENDENT OF SCHOOLS
SUPERVISOR OF MUSIC
SUPERVISOR OF PRIMARY GRADES
SUPERVISOR OF ELEMENTARY GRADES AND JUNIOR HIGH SCHOOLS
SUPERVISOR OF HOUSEHOLD ARTS
SUPERVISOR OF PENMANSHIP
SUPERVISOR OF ART
SUPERVISOR OF PHYSICAL EDUCATION
SUPERVISOR OF MANUAL TRAINING
DIRECTOR OF VOCATIONAL EDUCATION
DIRECTOR OF VOCATIONAL GUIDANCE
PRINCIPALS
PRINCIPALS
PRINCIPALS
PRINCIPALS
PRINCIPALS
PRINCIPALS
TEACHERS
TEACHERS
TEACHERS
TEACHERS
TEACHERS
TEACHERS
STUDENTS
STUDENTS
STUDENTS
STUDENTS
STUDENTS
STUDENTS

This development has been paralleled in our educational system, as is shown by Chart 23, "Line-and-staff Type of Schoolroom Organization." Here the Board of Education has its committees, as shown in the chart, who consider, consult, advise, and recommend with and to the Board of Education. The line of authority then runs down to the superintendent of schools, who also has specialists as his advisers, and to whom he delegates responsibility and authority as he sees fit. But the main line of

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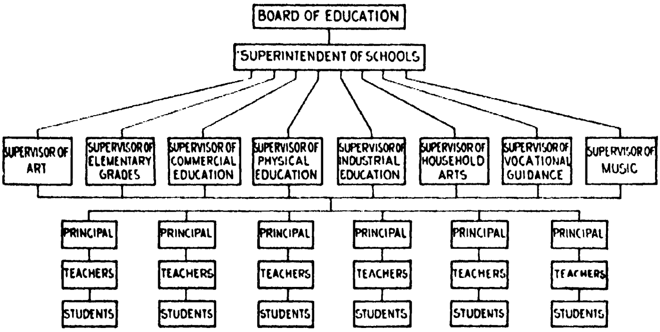
[4] *Ibid.*, Diemer, p. 17; *Idem.*, Kimball, pp. 73–75.

*authority still runs from the superintendent to the principals* of the various school units, with the supervisors coming in with more or less authority, sometimes in a purely advisory capacity, sometimes with definite authority to give orders in their particular functional field, and sometimes with vague authority, depending upon their personal relations with the principals. In this type of organization difficulties are sure to occur, particularly between the principals, teachers, and supervisors, the teachers receiving orders, directions, supervision, and instructions from two or more sources. This, of course, leads to confusion and is favorable to the development of insubordination, professional jealousies, personal prejudices, and antagonisms.

### 3. Combination Line, Staff, and Functional Type of School Organization

Following a logical line of evolution, organizations develop into the type shown in Chart 24. Here we see that the superintendent of schools has definitely transferred to the various supervisors more or less authority and responsibility within their particular functional fields. In this type of organization the supervisors are superior to the principals and teachers within their special functional fields. The chart shows a large number of supervisors with a comparatively small number of principals. Of course, this condition does not exist exactly as charted. Any school organization may have fewer supervisors and will have many more principals than indicated in the chart.

Chart 24.—Combination Line, Staff and Functional Type of School Organization


BOARD OF EDUCATION
SUPERINTENDENT OF SCHOOLS
SUPERVISOR OF ART
SUPERVISOR OF ELEMENTARY GRADES
SUPERVISOR OF COMMERCIAL EDUCATION
SUPERVISOR OF PHYSICAL EDUCATION
SUPERVISOR OF INDUSTRIAL EDUCATION
SUPERVISOR OF HOUSEHOLD ARTS
SUPERVISOR OF VOCATIONAL GUIDANCE
SUPERVISOR OF MUSIC
PRINCIPAL
PRINCIPAL
PRINCIPAL
PRINCIPAL
PRINCIPAL
PRINCIPAL
TEACHERS
TEACHERS
TEACHERS
TEACHERS
TEACHERS
TEACHERS
STUDENTS
STUDENTS
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STUDENTS

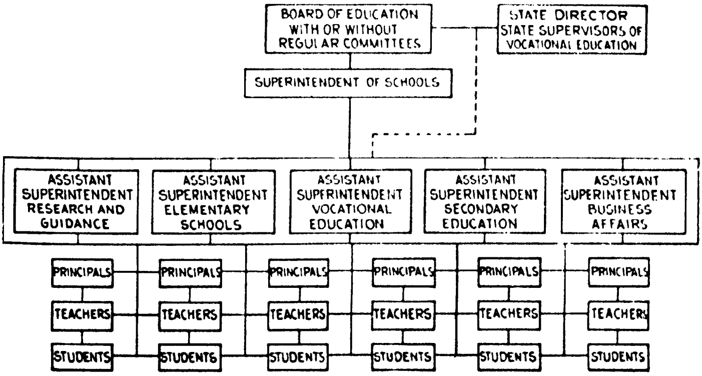
### 4. LINE FUNCTIONAL TYPE OF SCHOOL ORGANIZATION

In this type the authority of the staff is no longer limited to that of giving advice to their chiefs. They have full authority within their special field. It is extended and covers all phases of their speciality or "function" in all parts of the educational organization. They are no longer limited to assisting in formulating rules and policies, but assist in the conduct, control, and operation of the regular routine of business, and, most important of all, the line of authority has, in a measure, been eliminated, and so far as their particular "function" is concerned they deal directly with any member of the personnel.

Under this type of organization the expert has entire charge of the certain type of activity or function in the entire field of the enterprise, he devotes his entire time and attention to that certain function, and his authority is supreme in his particular field, with approval and veto power in the hands of the superintendent.

Functional control has been best developed in factory organizations, where its advantages have been most manifest. It conveys expert knowledge, advice, instructions, and assistance directly to each worker from experts, and not through foremen only partially educated in the several fields. This is the form of educational organization toward which the larger and medium-sized cities are undoubtedly tending, and is shown in Chart 25.

CHART 25.—LINE FUNCTIONAL TYPE OF SCHOOL ORGANIZATION

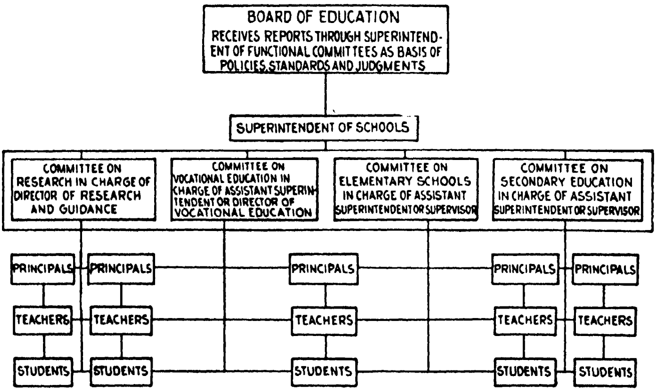

BOARD OF EDUCATION WITH OR WITHOUT REGULAR COMMITTEES
STATE DIRECTOR STATE SUPERVISORS OF VOCATIONAL EDUCATION
SUPERINTENDENT OF SCHOOLS
ASSISTANT SUPERINTENDENT RESEARCH AND GUIDANCE
ASSISTANT SUPERINTENDENT ELEMENTARY SCHOOLS
ASSISTANT SUPERINTENDENT VOCATIONAL EDUCATION
ASSISTANT SUPERINTENDENT SECONDARY EDUCATION
ASSISTANT SUPERINTENDENT BUSINESS AFFAIRS
PRINCIPALS
TEACHERS
STUDENTS

This type shows the development of the specialist who is in direct charge of all phases of his work wherever it may be within the entire school system. Some of these functions, as will be seen, are defined by administrative units, such as the assistant superintendent or supervisor in charge of the elementary schools, or in charge of secondary education. Other functions are determined in terms of type of education, such as assistant superintendent, director, or supervisor in charge of physical education, commercial education, adult education, Americanization, vocational education, practical arts work, vocational guidance, etc., his responsibility and field of activity going to any part of the school system where his work may be present.

### 5. Functional-committee Type of School Organization

In a few school systems there is in process of development the type of organization shown in Chart 26.

Chart 26.—Functional-committee Type of School Organization


BOARD OF EDUCATION
RECEIVES REPORTS THROUGH SUPERINTENDENT OF FUNCTIONAL COMMITTEES AS BASIS OF POLICIES, STANDARDS AND JUDGMENTS
SUPERINTENDENT OF SCHOOLS
COMMITTEE ON RESEARCH IN CHARGE OF DIRECTOR OF RESEARCH AND GUIDANCE
COMMITTEE ON VOCATIONAL EDUCATION IN CHARGE OF ASSISTANT SUPERINTENDENT OR DIRECTOR OF VOCATIONAL EDUCATION
COMMITTEE ON ELEMENTARY SCHOOLS IN CHARGE OF ASSISTANT SUPERINTENDENT OR SUPERVISOR
COMMITTEE ON SECONDARY EDUCATION IN CHARGE OF ASSISTANT SUPERINTENDENT OR SUPERVISOR
PRINCIPALS
PRINCIPALS
PRINCIPALS
PRINCIPALS
PRINCIPALS
TEACHERS
TEACHERS
TEACHERS
TEACHERS
TEACHERS
STUDENTS
STUDENTS
STUDENTS
STUDENTS
STUDENTS

This is a direct outgrowth of the democratic ideal in educational administration where the policies covering various activities are developed by committees, with the specialist acting as chairman of the committee. The personnel of this committee may be made up entirely or proportionately of teachers, professional and business men, manufacturers, or other citizens of the community, the responsibility for the appointment or the approval of the committees resting with the superintendent of schools. This form of organization has not as yet developed to the point where it is very common in our school systems, although it is quite common in the larger business organizations.

The big question involved in all of these forms of organization seems to revolve around the status of the principals of the various school units. Is he and shall he be supreme in all fields in his school, having direct authority and responsibility for all the activities of his school? Is it possible that one person may be competent to organize, direct, and supervise the work in all the various special fields now represented in our public schools? Or shall the principals of these school units be reduced to a mere routine administrator of the bell-ringer type in charge of reports and discipline, but with little or no supervisory responsibility?

On the other hand, is the specially trained expert to be really in charge of the field in which he is expert, is he to be a real supervisor, or is he to be a mere inspector? Is the average school principal now competent to organize, supervise, and administer all the special branches of education represented in his school? With increasing specialization will he be more or less competent?

What agencies are now training principals that are so competent? If they are so competent and are being trained, why continue training specialists? This question of the present and future status of the principal is a serious one and one that cannot be answered by superficialities and snap judgments.

## A JOB ANALYSIS AND STATEMENT OF THE FUNCTIONS AND RESPONSIBILITIES OF THE DIRECTOR OF VOCATIONAL GUIDANCE IN A CITY PUBLIC SCHOOL SYSTEM

The following Job Analysis and Statement of the Functions and Responsibilities of the Director of Vocational Guidance in a City Public School System is an attempt to define the functions and responsibilities of such a person, regardless of the form of organization of which he may be a part, on the basis of a job analysis. This statement is not put forth as a final or an authoritative statement of just what the responsibilities and functions of a director of vocational guidance are or should be. It is put forth as a method of procedure that might well be adopted for all the administrative positions in an educational system. When this job analysis has been made, it may be necessary or advisable to transfer certain functions to other persons or to add other functions. Whatever the case may be, it is quite certain that the person in charge of vocational guidance should either be held directly responsible for the functions and responsibilities as outlined, or they should be delegated to and performed by some other person. In either case the responsibility and authority should be clearly defined.

It is absolutely necessary to the success of any person and the effective functioning of an expert in any position that his functions and the scope of his responsibilities shall be clearly outlined and thoroughly defined and accepted by the persons to whom he is responsible, who are responsible to him, and with whom he comes in contact. This is an axiom in the scientific management of business and industry and is equally true in the scientific management of our public school system and all of its activities.

## THE EDINBURGH STATEMENT

The Edinburgh (Scotland) School Board seemed to have felt the necessity of making an analysis and statement of the job of Director of the Educational Information and Employment Department when in 1911 they made the following statements:[5]

### 1. Duties of Directors

1. To interview and advise boys and girls, and their parents or guardians if possible, with regard to (*a*) the occupations for which the boys and girls are suited by ability, taste, character, and education; (*b*) the further educational courses which bear directly on these occupations; and (*c*) the opportunities which exist in the various occupations.

2. To prepare leaflets and pamphlets or tabulated matter giving information to the scholars about Continuation Work.

3. To keep a record of all pupils who leave school, their educational attainments, the employment they enter upon, and their progress at Continuation Classes.

4. To send reports to employers when desired as to the progress and attendance of the employees at classes.

5. To organize such supervision, as is approved by the Board, of boys and girls after they have obtained employment both in regard to attendance at Continuation Classes and progress in their industrial career.

6. To act as organizer of the Continuation Classes, and to keep the system of further education in real touch with the industrial needs of the locality.

7. To report periodically on the work of the Department.

### 2. Duties of Headmasters

1. To see that the Registration Cards for pupils leaving school are duly filled up and forwarded to the Director.

2. To furnish such additional information regarding leaving pupils as may be required.

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[5] *Handbook of The Educational Information and Employment Department*, Edinburgh School Board, Edinburgh, Scotland, 1911, p. 56.

3. To cooperate with the Board in its special efforts to guide boys and girls into the Continuation Classes as soon as possible after the termination of their Day School career.

4. To arrange meetings of leaving pupils and their parents to be addressed by the Visiting Members of the Board in the month of November, or at such other time as is found more convenient.

5. To address collectively before the Summer Holidays the senior pupils on the question of choice of suitable occupation and early enrolment in Continuation Classes.

6. To grant to the parents of leaving pupils an interview to discuss the future of their children.

7. To give to pupils in their last year at every suitable opportunity advice regarding suitable employment and education.

### 3. The Principles of Action[6]

This part of the problem may be best considered if the functions of a juvenile employment organization are stated. These are briefly, as follows:

1. Advice to young persons as to the pursuits for which they are by ability, taste, character, and education suited.
2. The supervision, in certain cases, of the young worker, after he has obtained employment, so that he is induced to take advantage of all educational facilities pertinent to his work, and is advised as to the various steps in his industrial career.
3. The keeping of the system of further education in real touch with the industrial needs of the locality.
4. Advice to young persons as to the opportunities which exist in the various occupations.
5. Collection and promulgation of general information in regard to industrial conditions.
6. Registration, *i.e.*, bringing into contact the employer with a specific position to offer, and the young person suited for and desiring such a position.

It is necessary that some person shall be responsible for the selection and supervision of counselors and teachers, for equipment, materials, and supplies needed, for the development of courses of study, for the maintenance of adequate records, for the formulation and submission of budgets, for research work in the varied phases and fields of guidance, for the formulation of new proposals, for cooperating with the many and varied agencies and groups interested in the problems of vocational guidance, and for regular and special reports as called for by other administrative units.

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[6] *Ibid.* pp. 7–8.

The authority of the director of vocational guidance is, of course, derived from the school board through the superintendent of schools or commissioner of education.

The following discussion of the functions and responsibilities of the director of vocational guidance in a city public school system is put forth as a basis for discussion and consideration, rather than as a definite proposal for all systems. It will, of course, be clearly recognized that the functions and responsibilities of such an individual will vary with the type of school organization of which he is a part, with the size of the town, with the type of school system, and with the community which it serves. It will also vary with the type of personnel that is already at work in the school system. However as this may be, the fact remains that it is a distinct duty and responsibility of the superintendent of schools to locate and specify definitely the functions, responsibilities, lines of authority, and lines of cooperation of the director of vocational guidance within his school system. This specification should be accepted and adhered to by all parties intimately concerned.

## THE RESPONSIBILITIES OF THE DIRECTOR OF VOCATIONAL GUIDANCE

The responsibilities of a director of vocational guidance may be classified under the following nine heads:

### I. The Selection of Advisers or Counselors

The director of vocational guidance should have the power to select and recommend to the superintendent the entire personnel of his force. In addition, he should have complete control over the assignment and transfer of these counselors. He should have complete control over their supervision and reports. He should be responsible for their further professional training during service and have power to control or to call and lead conferences. He should be responsible for their proper certification, and recommendations for promotion, retirement, or dismissal. He should have the power to recommend individual merit salary increases, but would, of course, have no authority over blanket or automatic increases in salary. Finally, he should be responsible for the maintenance of a rating system for all of the advisers and counselors who work under him.

## II. Tests and Testing

The director of vocational guidance should have the power to select and use, subject to disapproval by the superintendent, all kinds of tests, scales, and measures that have to do with the student body. This may or may not include achievement tests. He should have the power to regulate the use of these tests, to make requisitions for them, to distribute them. He should have complete control of the results of these tests, the filing of the tests, and tests results. He should be held responsible for maintaining an inventory of all tests and, wherever necessary, for the development of special tests for special groups as needed. A summary of the results of these tests, with an indication of their significance, should be regularly forwarded as special or general reports to the superintendent.

## III. Courses of Study

The director of vocational guidance should be held responsible for the development of coursesof study in vocational information. These courses should be developed preferably in conference with teachers, employers, employees, and counselors, subject to final approval by the superintendent. The director should be held responsible for the formulation, revision, adaptation, and unification of such courses. He should recommend textbooks, should control course examinations, should keep a complete file of all materials used in these courses, should be held responsible for the methods of teaching and the dissemination of vocational information, and for developing sources of vocational information.

The director should also be responsible for the development of try-out courses in schools, in industry, in business, and part-time try-outs, vacation work, and other similar activities that are considered as functioning as try-out courses.

## IV. Records

The director of vocational guidance should be held responsible for maintaining complete records concerning (1) classes, programs, registration, and syllabi; (2) teachers and advisers, in regard to their training, their teaching programs, their salaries, their professional studies, their ratings, their professional activities; (3) student data, complete records concerning every item of information concerning individual students that would be of value in vocational guidance, such as the I.Q., or intelligence quotient; the I.B., the index of brightness; the C.A., the chronological age; the A.A., the anatomical age; the M.A., the mental age; A.Q., the achievement quotient, etc.; the physical limitations of these students, their major characteristics, the vacation work they are doing, their part-time work, their economic status, their aptitudes, their avocations. He should also keep a record of extra-school activities, the elimination of students from certain classes or schools, the dominant interests of individual students, records of retardation, and a record of employment certificates given out. (4) Vocational data, such as opportunity for full-time work, for part-time work, for vacation work, for apprenticeship, and supervision and follow-up data. (5) Training data, opportunities for specific vocational educational training in the public schools, private schools, corporation schools, on the job, scholarships. (6) Costs of vocational guidance, cost per student, per class, per teacher, per adviser, per building.

## V. Research Work

In performing the function of research the director of vocational guidance should work with advisory boards, individual laymen, teachers, cooperating agencies and committees on such problems as (1) surveys of vocations, schools, students; (2) the making of analyses of jobs; (3) of individuals; (4) in regard to methods of vocational guidance; (5) forms, blanks, records, and reports; (6) systems of vocational guidance, a general city system, and special systems for the various school units; (7) the best method of handling special cases; (8) the development, use, and interpretations of all sorts of tests and test results, such as intelligence, vocational, achievement, prognosis, aptitude, and character tests; (9) follow-up work and employment supervision; (10) general statistics of value in any of the phases of guidance; (11) research in regard to the cost of vocational guidance.

### VI. Cooperation

The director of vocational guidance should be held responsible for the formulation of plans and systems for effective cooperation with the various agencies interested in the problems of vocational or life guidance. Some of these agencies are employers' associations; employees' associations; other educational institutions both public and private, such as the Y. M. C. A., Y. W. C. A., Y. M. H. A., the K. of C.; the United States Junior Employment Service; employment managers' associations, and individual employment managers; the wide varieties of employment agencies; other departments of the school system, such as the research department, the attendance department, truant officers, home visitors, the medical department, the parent-teachers' association, and the various teachers' associations. In this group we also find the Boy Scouts, Juvenile Court Officers, Child Welfare Association, Big Brothers' Association, Rotary Clubs, Kiwanis Clubs, Elks, settlement houses, reformatories, and the "coordinators," if they exist in the school system.

### VII. New Proposals

The director of vocational guidance should be held responsible for the formulation of new proposals which should be worked out in conference with advisory boards, teachers, supervisors, and cooperating agencies, and be submitted to the superintendent of schools concerning methods, surveys, tests, classes, data, personnel and relationships, etc.

### VIII. Budgets

The director of vocational guidance shall, on request, or as a regular procedure, formulate and submit to the superintendent a general budget covering salaries, equipment, supplies and materials, a contingent fund, and special budgets as called for.

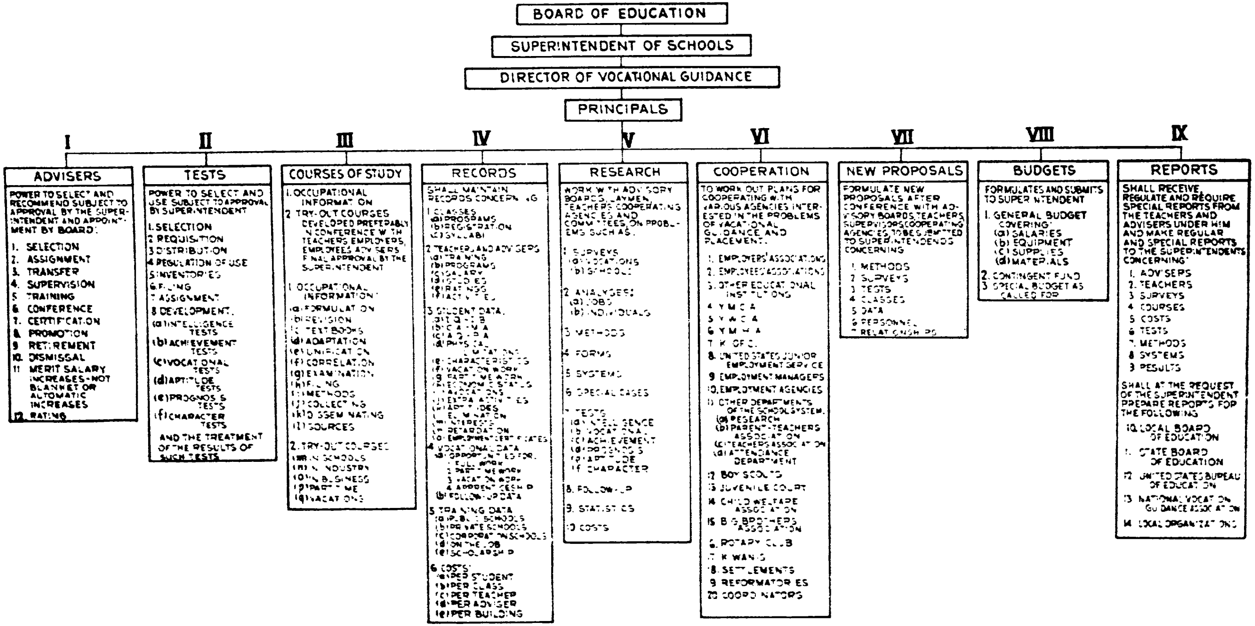
### IX. Reports

The director of vocational guidance should receive regular and special reports from the teachers and advisers under him and should make regular and special reports to the superintendent concerning advisers, teachers, surveys, courses, costs, tests, methods, systems, results, interpretation of results, conclusions, and recommendations. He should at the request of the superintendent prepare reports as requested by the local Board of Education, State Board of Education, United States Bureau of Education, the National Vocational Guidance Association, and local organizations.

As stated at the beginning of this chapter, this outline of the functions and responsibilities of the director of vocational guidance is merely suggestive. Every superintendent and director will have to make modifications, eliminations, and adaptations to fit the particular needs of their school system, community, personnel, and the particular piece of work they wish to have done at any particular time in that particular school or community. It must be kept clearly in mind, however, that, no matter what modifications are made, the place, authority, powers, functions, title, and responsibilities of the person in charge of the important function of guidance must be clearly and definitely outlined and agreed to by all parties concerned, otherwise confusion, misunderstanding, and inefficiency will result.

Following is a sample chart showing the responsibilities and functions of the director of vocational guidance in a city school system:

CHART 27.—A FUNCTIONAL CHART OF THE RESPONSIBILITIES OF THE DIRECTOR OF GUIDANCE IN A CITY PUBLIC SCHOOL SYSTEM



## CASE PROBLEM[7]

### THE NEW YORK STATE VOCATIONAL GUIDANCE LAW

The Assembly of the State of New York has recently (May, 1924) passed the following legislation:

"The board of education of each city and of each such school district may employ one or more qualified teachers for the purpose of issuing employment certificates, providing vocational guidance instruction and placement or employment service for minors in attendance upon part-time or continuation schools and such other minors under the age of 18 years as are in regular attendance upon full-time instruction. Such vocational guidance courses and the plans for placement or employment service and the qualifications of such teachers shall be approved by the commissioner of education. The commissioner of education may make an apportionment of money as provided in Sec. 605 of this chapter on account of the employment of such vocational guidance teachers on the same basis and in the same manner as for part-time or continuation school teachers." Lines 8-21, p. 8, Bill 397, New York Assembly, Jan. 22, 1924.

### Questions

1. Does the above mean that a superintendent of schools must appoint guidance counselors?
2. If the superintendent does appoint such counselors in schools other than continuation schools, will he receive state aid on their salaries?
3. What is meant by vocational guidance, teachers, course, instruction? Can guidance be taught?
4. Does the above apply to junior high schools? Trade schools? Evening schools? Senior high schools? Elementary schools? Kindergartens? Opportunity classes?
5. Define a "qualified teacher" of vocational guidance.
6. Why have these "teachers" of guidance been placed on the same basis as continuation teachers?
7. What phases of vocational guidance has the Commissioner of Education in mind? (See pages 31 ff., this volume.)

## CASE PROBLEM

### RETARDATION IN CINCINNATI

A study by TROUNSTINE and HART, *Retardation in Cincinnati Public Schools*, vol. i, No. 1, February 15, 1918, published by the Helen S. Trounstine Foundation, Cincinnati, Ohio, presents the following summary on pages 3 and 4:

1. Three out of every five children in the public schools fail at least once before they leave school. One out of every five fails at least three times. In the fourth, fifth, sixth, and seventh grades, more than half of the children are retarded.

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[7] See PAYNE, ARTHUR F., "New Legislation Concerning Vocational Guidance in New York State," *School and Society*, vol. xx, No. 511, Oct. 11, 1924.

2. The following conclusions are based on intensive study of 656 children who failed in Cincinnati schools in 1914–15.

3. More than half of these children were absent three weeks or more during the school year. The average absence of the children who failed was 25 days, compared with an average absence of five days on the part of children who passed.

4. Illness was said to be responsible for four-fifths of the absence, and home conditions for practically all the rest.

5. Physical defects are at least three times as common among children who failed as among children who passed.

6. Two-thirds of the children who failed in these schools came from families with incomes too small to purchase the necessities of wholesome living.

7. The majority of children who failed live in homes of three rooms or less. Not more than one child lives in a house with a bathtub.

8. The mother of one child out of every five who failed was gainfully employed.

9. A lack of outdoor recreation is apparent among these children.

10. German or Italian is spoken in the homes of one-sixth of the children who failed.

11. About one-fifth of the children who failed had changed schools during the year, and this may have contributed to failure in some cases.

12. About one-eighth of the children who failed were feebleminded, and another eighth, though not feebleminded, were decidedly dull.

13. Lack of enthusiasm and ambition were important causes of failure.

14. Boys failed somewhat more frequently than girls.

15. Failures occur chiefly in abstract studies like grammar, history, arithmetic, and geography, while concrete and practical studies, like manual training and domestic science, are more easily mastered.

16. Different schools have different standards as to the quality of work required for passing. The figures indicate the probability that in some schools twice as many children failed as would be held back under similar conditions in other schools.

### Questions

1. If all these children had been placed in the average American home environment, what effect would this possibly have had on the school career?

2. Is environment or inheritance the causal factor?

3. Do children fail because of absence, or are they absent because they are failing? Does the I.Q. have any relationship here?

4. What about illness and physical defects; environment or inheritance; normal or subnormal intelligence?

5. What are the fundamental causes for lack of enthusiasm and ambition?

6. What do the comparative failures in the abstract and concrete studies indicate?

7. As a Director of Vocational Guidance, what method of procedure would you adopt with this group?

8. What type of tests would you apply?

9. What remedial measures would you propose?

10. What proportion of your total time and effort would you spend on such a group?

11. Into what divisions would such a group probably break up on final analysis?

12. What would you propose for each group?

13. Who should be responsible for such research?

14. When doing such research, or applying remedial measures to such groups what should be the relationship of the Director of Guidance to principals, teachers, parents, supervisors, social workers?

15. Make a list of agencies that might cooperate in the remedial measures you propose for this group.

## CHAPTER XV

# THE FUNCTIONS AND RESPONSIBILITIES OF THE VOCATIONAL GUIDANCE ADVISER

Those in charge of, and responsible for, the selection and assignment of the guidance adviser have the responsibility of formulating the statement of the responsibilities of that adviser and to whom he or she is responsible, of outlining the sphere of his or her activities, and setting up standards of accomplishment. These may be classified under the following heads:

### I. TESTS AND TECHNIQUE

A guidance adviser should be thoroughly familiar with, and specially trained in, the technique of giving all kinds of tests, such as intelligence, achievement, prognosis, aptitude, character, psychiatric, and vocational tests. This includes the treatment and the interpretation of results of tests except of course in special cases.

### II. RECORDS AND REPORTS

The vocational guidance adviser should maintain complete and up-to-date records and make reports as called for concerning (1) classes, programs, registration, syllabi, and tests; (2) student data—I.Q., I.B., C.A., M.A., A.Q., A.A., physical limitations, characteristics, aptitudes, interests, avocations, attitudes, retardation, acceleration, elimination, employment certificates, vacation work, part-time work, social status, economic status, parents occupations, extra-school activities, placement, follow-up, supervision, etc.; (3) vocational data on opportunities for full-time work, part-time work, vacation work, apprenticeship, follow-up and supervision data; (4) education and training, data of opportunities in the public schools, private schools, corporation schools, on the job, scholarships available, apprenticeship, etc.

### III. COURSES OF STUDY

The guidance adviser should supervise or conduct courses of study in vocational information, supervise or direct the collection and dissemination of vocational information, develop new sources of vocational information, file all material used in vocational and educational information, have charge of guidance textbooks used, set stated examinations, correlate guidance courses with other school activities, and from time to time revise these courses as necessary. This adviser should also supervise, conduct, or cooperate in the conduct of try-out courses, whether they are given in school, in industry, in business, as part-time activities, or during vacations.

## IV. COOPERATION

The guidance adviser should at all times be ready to cooperate with the various agencies interested in the problems of vocational guidance, such as employers' associations, employees' associations, other educational institutions, Y. M. C. A., Y. W. C. A., K. of C., Y. M. H. A., United States Junior Employment Service, individual employment managers, various employment agencies, Boy' Scouts, Juvenile Court officers, Child Welfare Association, Big Brothers, Rotary clubs, Elks, Kiwanis, settlement houses, reformatories, and other departments of the school systems, such as research departments, Parents-Teachers' Associations, attendance department, medical departments, visiting teachers, coordinators, and truant officers.

## V. PLACEMENT

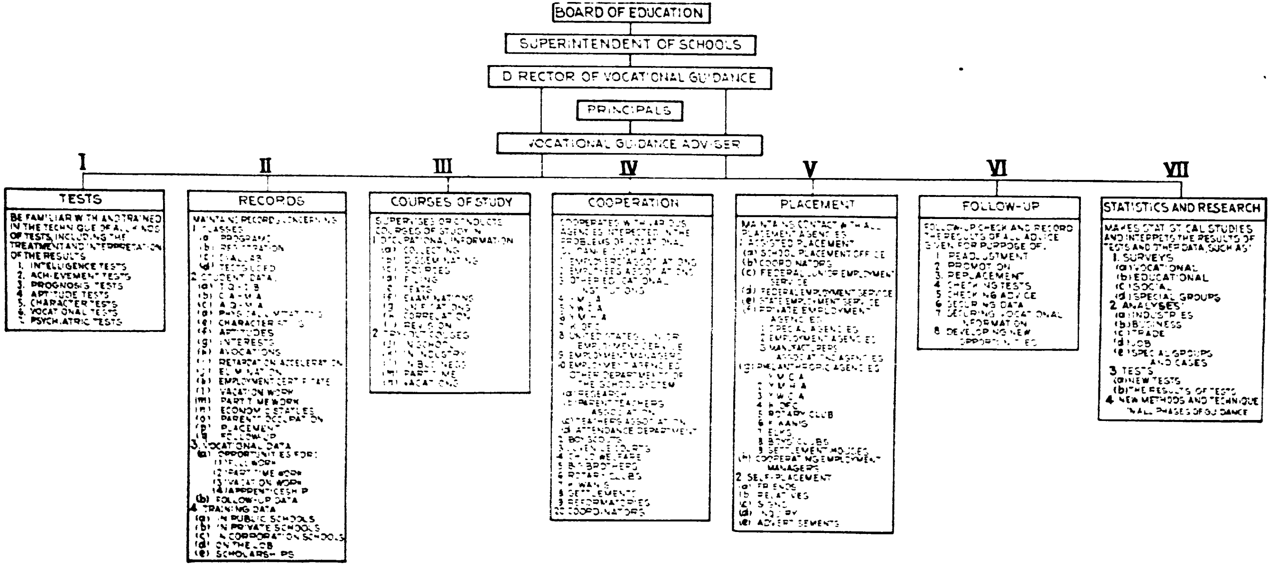
The guidance adviser should maintain and develop contacts with all forms of placement agencies, such as school placement officers, coordinators, United States Junior Employment Service, Federal Employment Service, State Employment Service, private employment agencies, special agencies, employers' agencies, manufacturers' associations' agencies, philanthropic agencies such as Y. M. C. A., Y. M. H. A., K. of C., Y. W. C. A., Rotary Club, Kiwanis, Elks, Boys' clubs, settlement houses—and develop the self-placement idea through friends, relatives, signs, inquiries, alumni associations, newspaper advertisements, etc.

## VI. FOLLOW-UP AND EMPLOYMENT SUPERVISION

The guidance adviser should record, check, and follow up the results of all advice given, for the purposes of making readjustments, making promotions, replacing, checking tests, checking advice, shortages in school curricula, developing shortages in the equipment of individuals, securing data of value, securing vocational information, developing new opportunities of service.

## VII. STATISTICS AND RESEARCH

The guidance adviser should make statistical studies and interpret the results of tests and other data, such as vocational, CHART 28.—A FUNCTIONAL CHART OF THE RESPONSIBILITIES OF THE GUIDANCE ADVISOR



educational and social surveys, and surveys of special case groups; make analyses of industries, businesses, trades, jobs, special individuals, and case groups; collect statistics, and do research work in regard to new tests, the results of tests, new methods and technique in all the phases of guidance.

It is necessary for the effective functioning of the guidance service that there shall be a distinct understanding and agreement as to whom the adviser is responsible, from whom he (or she) shall receive orders, and to whom he shall present reports. If this is not done, confusion and dissatisfaction will almost inevitably result.

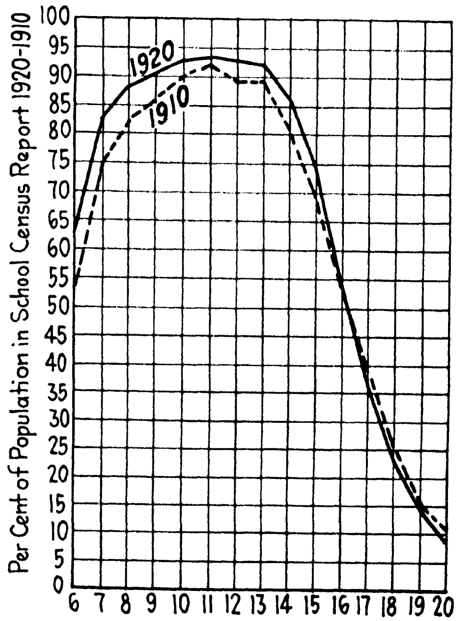
Chart 28 presents in brief form the functions and responsibilities of the guidance adviser.

### CASE PROBLEM

School Attendance by Years of Age

*Bull.*, No. 16, 1923, "Statistical Survey of Education, 1919–20," by DuBois, Florence, United States Bureau of Education, on page 9 presents the following chart:

Per Cent of Children Attending Schools at the Various Ages in 1910 and in 1920



### Questions

1. At what age and grade should guidance begin?
2. At what age and grade should cumulative records begin?
3. At what age and grade should try-outs begin?
4. At what age and grade should tests begin?
5. At what age and grade should placement begin?
6. Do your answers to the above apply to all students?
7. Which particular groups leave school at 11, 12, 13, 14, 15, 16 years of age?
8. How do you account for the increase in attendance of the 13- to 16-year group?
9. What responsibility is developed for the school by the Compulsory Education Law? The Continuation School Law?
10. Is it a natural or an unnatural thing for children to leave school at 13, 14, 15? Is it a good thing or a bad thing for them to leave school? For all? For some?
11. On what basis can we justify holding by law?
12. How long should all children stay in school?
13. What very definite skills and attitudes should all children have when they leave school? Which is most important? For the child? For the state?
14. What are the most pressing needs of these children as they leave school?
15. Does the school as at present organized satisfy these needs?
16. What are the outstanding characteristics of these children as they leave school?
17. What definite things can guidance do for them?
18. Check and list the responsibilities of the vocational guidance adviser toward this group with those given in the chart on page 239.
19. What agencies might cooperate in applying remedial measures?
20. What agencies might cooperate in doing research with and for certain case groups that should be segregated?

### CASE PROBLEM

A survey of the girls in a New York City continuation school gives the following figures:

TABLE XXVII.—OCCUPATIONAL SURVEY, DECEMBER, 1922

| Occupations | Number | Total wage | Average wage |
|---|---|---|---|
| 1. Bookbinders, printing and publishing | 28 | $ 362.60 | $12.95 |
| 2. Box making | 21 | 252.55 | 12.03 |
| 3. Candy | 62 | 789.64 | 12.74 |
| 4. Crochet beading and crocheting | 24 | 267.35 | 11.63 |
| 5. Department stores | 112 | 1,219.11 | 10.79 |
| 6. Factories | 110 | 1,393.51 | 11.52 |
| 7. Furs | 6 | 81.00 | 13.50 |
| 8. Garment making | 58 | 696.00 | 12.00 |
| 9. Home employment | 137 | 50.00 | 9.00 |
| 10. Housework | 20 | 166.60 | 8.33 |
| 11. Millinery, flowers, feathers | 25 | 284.00 | 11.36 |
| 12. Miscellaneous | 28 | 319.20 | 11.40 |
| 13. Needle trades | 23 | 264.73 | 11.51 |
| 14. Personal service | 55 | 629.20 | 11.45 |
| 15. Professional | 6 | 157.00 | 26.16 |
| 16. Telephone | 23 | 377.14 | 16.39 |
| 17. Unemployed | 85 | | |
| | | $7,309.63 | $12.37 |

| | |
|---|---|
| Number of girls in survey | 813 |
| Total wages | $7,309.63 |
| Average weekly wages | 12.37 |

TABLE XXVIII.—SCHOOL COURSE DESIRED

| | |
|---|---|
| Drawing and designing | 15 |
| Dressmaking | 261 |
| English | 27 |
| Homemaking | 156 |
| Millinery | 136 |
| Office practice | 176 |
| Salesmanship | 40 |
| | 811 |

### Questions

1. Is there any relationship between wage and skill as shown in these figures?

2. What are the opportunities for girls from 14 to 16 in New York City?

3. From your own knowledge, which occupation offers the best promotional opportunities? Are the greatest number of girls in them or in the highest paid occupations?

4. Is the wage paid based on quality of worker, length of training, skill required, disagreeableness of work, poor working conditions, long hours, or Minimum Wage Law?

5. What is the relationship between the occupations and the school course desired?

6. What guidance suggestions have you to make for this group of girls?

## CASE PROBLEM

CHART 29

MENTAL AGE

| | | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16+ |
|---|---|---|---|---|---|---|---|---|---|---|
| School mark | *A* | B. K. | .... | R. A. | .... | J. E. | .... | S. V. | .... | D. M. |
| | *B* | .... | I. W. | .... | .... | L. S. | .... | .... | H. P. | |
| | *C* | M. B. | Q. L. | .... | N. C. | E. H. | P. F. | H. B. | S. I. | |
| | *D* | .... | F. L. | G. U. | .... | M. K. | .... | .... | G. R. | |
| | *E* | .... | .... | O. T. | | | | | | |
| | *F* | C. M. | .... | .... | .... | K. T. | .... | .... | .... | A. K. |

The initials in the squares represent students.
The fixed factors for each student are mental age and school mark.
The varying factors are chronological age, school grade, and I.Q.

### Questions

| For any of the above students (represented by initials) assign a chronological age, school grade, and figure the intelligence quotient, then answer the following questions: | Yes | Doubtful | No |
|---|---|---|---|
| 1. Is the pupil doing his best? | | | |
| 2. Is another intelligence test advisable? | | | |
| 3. Would you advise acceleration? | | | |
| 4. Will the pupil be able to graduate from the grammar grades? | | | |
| 5. Will the pupil be able to graduate from the high school? | | | |
| 6. From which course in high school? | | | |
| 7. Should the pupil leave day school at end of the compulsory-age limit? | | | |
| 8. Would you advise that he enter an observation class? | | | |
| 9. Would you advise a vocational school course? | | | |
| 10. In which group of occupations will the individual probably find himself at age 30? | | | |

## CASE PROBLEM

*Joseph Fr.: Age 15.6.*
*Admitted Lynn Continuation School, September 17, 1920.*
*School Grade: Junior High, Seventh. Rated fair.*
*Reason for Leaving School: Discouraged.*
*Training Desired:* Machine work.
Parents Polish: Joseph native-born.
Continuation School Record: Attendance satisfactory.
Effort satisfactory.
Progress satisfactory.

| Job Record | Job | Wage | Reason for Leaving |
|---|---|---|---|
| Beny Kid Co. | Sorting skins | $12.00 | For General Electric |

*Remarks.*—Now serving apprenticeship sheet-metal worker General Electric Company; happy and making good.

### Questions

1. What is the fundamental difference between this case and that of Wm. A. Fa.? (See page 245.)
2. Is his probable intelligence level indicated? Of what significance is it?
3. Is nationality of parents a significant factor?
4. Do you think the Junior High was in any way at fault?
5. Was his training in the Continuation School, Vocational, Prevocational, General Continuation, Trade Preparatory, or Trade Extension?
6. What happened by chance to this boy that did not happen to Wm. A. Fa.?
7. What might vocational guidance have done for this boy?

## CASE PROBLEM

Bertha D.: Age 15.6.
Admitted: Lynn Continuation School, March 28, 1922.
Left: Lynn Continuation School, July 17, 1922.
Has been working illegally without permit.
Left English High School the first week of her second year.
Reason for Leaving: Disliked school.
Parents Canadian. Bertha native-born.
On entrance to Continuation School declared interests to be general, but soon asked for typewriting and commercial work and did satisfactory work.
Attended Continuation School 20 hours per week.
No job.

*Remarks.*—After leaving Continuation School secured job operating high-speed machine in local shoe shop. Has made no use of her typewriting and commercial work.

### Questions

1. What is her probable I.Q.?
2. Where should the blame be placed in this case?
3. What need is evident?
4. What phases of a well-organized system of vocational guidance would have been most effective?

## CASE PROBLEM

Wm. A. Fa.: Age 14.
Admitted Lynn Continuation School, December 12, 1921.
School Grade: eighth not completed. Rated fair.
Reason for Leaving School: Help needed at home; father out of work.
Both parents native-born.
Training Desired: Printing.
Continuation School Record: Attendance satisfactory.
Effort unsatisfactory.
Progress unsatisfactory.

| Job Record | | Job | Reason for Leaving |
|---|---|---|---|
| 1921, Nov. 22. | Western Union | Messenger | Did not like |
| 1922, Feb. 28. | Beny Kid Co. | Trimming skins | Did not like |
| 1922, June 25. | Tedesco Country Club | Caddy | End of season |
| 1922, Sept. 19. | Valley Press Co. | Errand boy | Firm moved out of town |
| 1922, Nov. 24. | Harries Co. | Errand boy | No reason |
| 1922, Dec. 13. | Winthrop and Bond Co. | Errand boy | |

*Remarks.*—Always getting a job that seems to "peter out." Apparently no fault of his. Obtains jobs easily. Still working in Boston, but has had three other jobs since Winthrop and Bond. A good-looking boy. No further record because he moved to Boston.

### Questions

1. Is his probable intelligence level indicated in his record? Where?
2. What is the probable cause of his rapid job changing?
3. Is he gaining anything from his various jobs? Losing anything?
4. What are the deficiencies in this continuation school record?
5. What might vocational guidance do for this boy?
6. What other data would you need about William or his environment before you would draft a guidance prescription for him?
7. In what vocational intelligence level were all of William's jobs? Were they so called "blind alley" jobs? Is William a "blind alley" boy? What other kind of jobs are open to such boys as William. Are there really any "blind alley" jobs? Should we not call them juvenile jobs instead?

## CASE PROBLEM

Chart 30.—Probabilities for Individuals with Varying I.Q.'s

| | Ages | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 12 | 14 | 16 | 18 | 20 | 22 | 25 | 30 | 35 | 40 | |
| University | | | | | | | | | | | Educational progress |
| College | | | | | | | | | | | |
| Technical school | | | | | | | | | | | |
| General high school | | | | | | | | | | | |
| Special high school | | | | | | | | | | | |
| Prevocational school | | | | | | | | | | | |
| Vocational school | | | | | | | | | | | |
| Grade school | | | | | | | | | | | |
| Evening school | | | | | | | | | | | |
| Continuation school | | | | | | | | | | | |
| Opportunity school | | | | | | | | | | | |
| Institution | | | | | | | | | | | |
| Profession | | | | | | | | | | | Vocational progress |
| Semi-profession | | | | | | | | | | | |
| Skilled occupation | | | | | | | | | | | |
| Specialized skill vocation | | | | | | | | | | | |
| Juvenile occupation | | | | | | | | | | | |
| Automatic skill occupation | | | | | | | | | | | |
| Common labor | | | | | | | | | | | |
| Economic liability | | | | | | | | | | | |

In the above chart, diagram the probable educational and vocational progress of the following type individuals;

1. Superior minds leaving school at 14, 16, 18, 20, 22, 25.
2. Average minds leaving school at 14, 16, 18, 20, 22, 25.
3. Dull minds leaving school at 14, 16.
4. Defective minds leaving school at 14, 16.
5. An epileptic, age 12.
6. A case of incipient dementia praecox, age 12.
7. A case, age 12, with one parent feebleminded.
8. A dull boy who likes to "make things," age 14.
9. A dull girl who likes to "make things," age 14.
10. A dull girl with recurrent hysteria, age 14.

11. An average mind with aptitude for music, age 16.

12. A dull mind with sex perversions, age 12.

13. A below-average person who believes that—he or she—receives messages from spirits, age 15.

14. A brother (age 12) and sister (age 16) whose parents are both mental defectives.

15. A boy (age 18) who is a pyromaniac.

16. A girl (age 16) who is a chronic "day dreamer" and acts out her dreams.

17. A boy (age 16) who is an habitual truant in an endeavor to "go west and kill Indians."

### Questions

1. Which of the above cases as case groups would need the least guidance?

2. Which would need expert individual diagnosis and constant observation?

3. Which would need no individual diagnosis, interview, information, or advice?

4. Which would benefit most from vocational information? Educational information? Which least?

5. Would you give the same tests to all? Why?

6. Would you give the same vocational information to all? Why?

7. Justify your right to make classifications of human beings and to advise or guide them into various life units and activities.

## CHAPTER XVI

# A PLAN FOR THE COLLECTION AND DISSEMINATION OF VOCATIONAL INFORMATION

As has already been noted, the entire field of vocational and educational guidance may be classified into two general fields, the *first* of which is diagnostic, in which the individual and all his capacities, and the environment in which he finds himself, are diagnosed, and advice given to him on the basis of such diagnosis.

After the diagnosis has been made and before the vocational counselor can give specific advice regarding the vocation to enter, it is necessary that the counselor have at hand a great deal of specific and classified information concerning the requirements, limitations, and possibilities of a wide variety of vocations. This is the *second* general field of vocational guidance—namely, the informative.

Vocational information must be classified according to several different items, some of which are (1) intelligence required for entrance; (2) education and special training required for entrance and advancement; (3) aptitudes or special abilities or capacities; (4) physical requirements and limitations; (5) physical conditions of work; (6) working conditions; (7) promotion and learning possibilities; (8) the status of the occupation; (9) age, sex, nationality, specified for entrance and many other similar items that are absolutely necessary if the advice is to be of any real value to the individual.

Up to the present time most of this information has been given in one of two ways. Under the *first* method a mature person with a wide range of experience and reading gives the information in a very general way to the individual. It is, of course, impossible for one person to know all that should be known about all the vocations and their possibilities. It is also impossible to make the distribution of vocational information an individual matter. The case group method must be used.

The *second* method of giving information was that of collecting into books certain information concerning certain occupations that were deemed valuable. A good illustration of this type is Gowin and Wheatley's *Occupations*, published by Ginn and Company in 1916, and revised by John M. Brewer in 1923; *Medicine as a Profession* by D. W. and E. W. Weaver, published by A. S. Barnes Company, New York, 1917.[1]

## BOOK VOCATIONAL INFORMATION

There are three methods of distributing this book information concerning the vocations:

1. Classes in occupational or vocational information are organized as part of the regular school program, meeting at certain stated periods. Sometimes these classes are required of all and sometimes they are elective. Generally, there is no attempt to differentiate the material or the students. These classes are organized and conducted in the same way as classes in arithmetic or in geography, and the vocational information is given to the students exactly as arithmetic or geography would be given.
2. Vocational information is given as a by-product in such regular classes as English, civics, geography, etc.
3. Students are assigned outside readings in vocational information and referred to books on file in the library.

In some cases visits are made to certain factories, stores, and offices and reports required. These visits may be used with either of the above methods. In the current literature much is made of these visits, but it is obviously impossible for all the students in our schools to visit all the vocations, as would be necessary to find out whether or not they would like to enter them.

The *first* question is: How accurate is this book information? How much knowledge does the compiler have of the real conditions that obtain within that occupation? *Second:* How long will it be before that information is out-of-date? At present, particularly in industry, occupations and conditions within the occupations are changing and shifting so rapidly that it is practically impossible for any one person to keep up with all these changes in all of the vocations. The *third* question: Do these books cover all the points upon which information should be given concerning these occupations? *Fourth:* Is it not possible that information concerning one occupation may be perfectly true in one locality but untrue in another locality, or that it may be true at one time and not true at another? Are the conditions in the meat-packing industry in the South the same as in the West and in the North? Are conditions in the steel industry in the Eastern States the same as conditions in the Southern States? Are these conditions the same today as they were a year ago? Five years ago? Will they be the same five years hence? *Fifth:* What kind of occupational information should be given to *all* the children of Lynn, Massachusetts, the home of shoe-making industry? To some groups? Should it be the same as that given to *all* the children of Providence, Rhode Island, and North Attleboro, Massachusetts, the home of the jewelry industry? Should the textbook be the same as that given to juniors in the wheat-growing country of the Dakotas, or the cotton-growing country of Mississippi, or the iron-mining towns of Virginia and Hibbing, Minnesota or in New York City? *Sixth:* Should we give the same kind of vocational information to students of low I.Q.'s and those of high I.Q.'s? To the children of laborers and the children of lawyers? Of dock hands and doctors? Children living in rural, suburban, village, or city homes? To children who expect to and can remain in school for five more years? To children who will leave school in five months or five weeks? *Seventh:* How much shall or should the preferences, prejudices, personality, experiences, and education of the teacher influence or determine the kind of vocational information given to groups of juniors?

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[1] The best source of information for books of this nature is *A Guide to the Study of Occupations* by F. J. ALLEN, Harvard University Press, Cambridge, Mass., 1921. In this book will be found a list of titles covering nearly 200 pages. See also Appendix C, this book.

Altogether too many of our classroom discussions of desirable jobs and vocations are so idealistic as to be impractical for the majority of the students or for anyone else. The writer heard the following idealistic, impractical type of job specification presented to a group of 200 continuation school boys:

> What (besides better hours, better wages, healthy conditions) are the points of a good job? Imagine a sensible man looking for satisfactory work, a vocational adviser guiding novices towards the best available occupation, and a statesman trying to mold the industrial world some-

> what nearer to the heart's desire—what should they try for? Physical and financial standards determine what we get out of our work. But what shall we get in it? Much or little, I answer, according to its fitness or unfitness for our personality—a factor much neglected nowadays.
>
> Among the points of a good job I shall name seven: (1) Difficulty and crudeness enough to call out our latent powers of mastery. (2) Variety so balanced by monotony as to suit the individual's needs. (3) A boss. (4) A chance to achieve, to build something, and to recognize what we have done. (5) A title and place which is ours. (6) Connection with some institution, some firm, or some cause which we can loyally serve. (7) Honorable and pleasant relation with our comrades in work. Fulfill these conditions and work is one of the best things in life.[2]

There was no recognition of the fact which is so apparent, namely, that this is an ideal set up by a cultured gentlemanly adult as his own ideal requirements for himself. Few of even the most fortunate can honestly say that they now have, or ever have had, a job that would meet such idealistic specifications.

## THE PROBLEM OF DEVELOPING VOCATIONAL INFORMATION FOR CERTAIN "CASE GROUPS"

One method of developing this problem situation is by the case method, an illustration of which follows:

> Assume that a survey of all 13- and 14-year olds in the city school system in which you hold the position of Director of Vocational Guidance has developed groups of considerable numbers who intend to leave full-time school as soon as the law allows, or very soon after.
>
> These groups are located in the following school units: (1) opportunity classes, (2) classes for mental defectives, (3) classes for physical defectives, (4) continuation classes, (5) prevocational schools, (6) vocational schools, (7) elementary schools, (8) first-year high school, (9) second-year high school, and (10) third-year high school. They are of varying aptitudes, capacities, and potentialities.
>
> Indicate on Chart 31 the exact kind of vocational information that you would present to the corresponding case groups:

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[2] CABOT, RICHARD C., *What Men Live By*, Houghton Mifflin Company, New York, 1914, pp. 27–8.

CHART 31.—CASE GROUP VOCATIONAL INFORMATION

| Case groups | Vocational information | Educational information |
|---|---|---|
| *Third-year High School* | | |
| Successes and failures in: | | |
| Academic courses | | |
| Commercial courses | | |
| Industrial Arts courses | | |
| Scientific courses | | |
| Household Arts courses | | |
| *Second-year High School* | | |
| Successes and failures in: | | |
| Academic courses | | |
| Industrial Arts courses | | |
| Commercial Arts courses | | |
| Scientific courses | | |
| Household Arts courses | | |
| *First-year High School* | | |
| Successes and failures in: | | |
| Academic courses | | |
| Industrial Arts courses | | |
| Commercial Arts courses | | |
| Scientific courses | | |
| Household Arts courses | | |
| *Elementary Schools* | | |
| Successes and failures in: | | |
| Fifth Grade | | |
| Sixth Grade | | |
| Seventh Grade | | |
| Eighth Grade | | |
| Vocational Schools | | |
| Prevocational Schools | | |
| Continuation Schools | | |
| Classes for Physical Defectives | | |
| Classes for Mental Defectives | | |
| Opportunity Classes | | |

## Questions

1. Make a list of the facts and data upon which you base your decisions.
2. Which are the three most important facts in the list?

3. Is there *one* book on "Occupational Information" that would satisfy the needs of *all* groups? Two? Three? Four? Five? Six? Give the names, authors, publishers of these books, also the groups for which they are particularly suited.

4. From what sources can you obtain suitable "educational information" for these groups?

5. Would one class organized to "make a survey of the world's opportunities" or to give a "bird's-eye view of the world's work" fill the needs of all these groups? Of any one group? Who is competent to teach it?

6. What is the one most important fact that you have kept in mind in arranging the kind of vocational information you would give these varied groups?

7. How are you planning to collect the information you need for these groups? From what sources? Who is going to collect it? How is it to be filed? How is its accuracy to be tested?

8. How are you planning to disseminate this information to the various groups after you have collected, checked, and compiled it?

9. Are you planning to use the same methods of collecting and disseminating for all groups?

It is hoped that this case study will show the utter impossibility of using a textbook on vocational information with any real effectiveness or functioning in making vocational choices, especially by the methods now in common use in our public schools.

## A NEW PROPOSAL CONCERNING VOCATIONAL INFORMATION

It seems to the writer that the present methods of collecting and disseminating vocational information may be considerably improved, this improvement to be based upon (1) the segregation of case groups, as has been indicated in the chart; (2) the discovery of the specific needs of these case groups as regards vocational and other guidance information; and (3) the presentation to these case groups of the specific type of guidance information they need.

The writer believes that, within any considerable group of young people, we may find or develop by the project or laboratory method all the vocational information which that group needs.

The method proposed is, in its essence, the project method, by which the student is placed in a real situation with a vital problem to solve, the method of attack is pointed out to him by the instructor, the sources of information are indicated, but the responsibility for solving his problem is placed upon him. In this case the problem would be to collect certain information concerning a specified occupation. The specified occupation may be that of the student's own free choice, or it may be chosen as a result of conference and advice of adviser, parents, and other interested parties.

## THE JOB ANALYSIS AS A DEVICE IN EDUCATIONAL RESEARCH

The particular device suggested for collecting vocational information, as described in the following pages, is the job analysis. In order that those readers to whom the job analysis is a new device in education may become acquainted with it, the following preliminary discussion is introduced at this time.

## A PRELIMINARY DISCUSSION OF JOB ANALYSIS

With the coming of scientific management, or, if one objects to that term, the application of science to management, has come the quite general use of the operation of analyzing a job for a wide variety of purposes. This is directly in line with the growth of scientific methods in business and industry and will undoubtedly prove to be a method which will be of increasing value in the field of education when its use has become more common.[3]

Job analysis deals primarily with the first of the four B's of scientific management, namely, "There is one best way to do anything." It also has to do in considerable degree with the other B's—"There is one best person to do that thing." "There is one best method of training that person to do that thing." "There is one best method to motivate that person to do that thing in the prescribed way."[3]

Job analysis is a development of the logical, scientific attitude of mind toward the problems of business, industry, and education. Managers, organizers, and administrators of all kinds are adopting the method of scientific, logical analysis toward all their problems. They analyze a situation into its various elements and factors and evaluate, weigh, and select the most important of these factors.

## JOB ANALYSIS DEFINED[4]

Job analysis is a method, a process, a means to an end, and not an end in itself. It may be defined as a process by which the facts and the data significant to a job are discovered, arranged, and recorded for the purpose of developing standards, specifications, methods, etc. Another definition is: Job analysis is a scientific study and statement of all the facts about a job which reveal its contents and the modifying factors which surround it.

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[3] See chap. III.

[4] See STRONG, E. D. and UHRBROCK, R. S., *Job Analysis and the Curriculum*, Williams and Wilkins, Baltimore, Md., 1923. Also LICHTNER, W. O., *Time Study and Job Analysis*, The Ronald Press Company, New York, 1921. Also TEAD, O. and METCALF, H. C., chap. xviii, "Job Analysis and Job Specifications," in their book *Personnel Administration*, McGraw-Hill Book Company, Inc., New York, 1920.

## TWO TYPES OF JOB ANALYSES

Before starting a job analysis it is always well to know the use which is to be made of the results of the analysis. There are, in general, two kinds of job analyses:

1. **The "Reservoir" Job Analysis.**—This is a job analysis which covers all parts of the job and all of its relationships. This analysis is recorded and then placed on file. When any information is desired concerning that particular job, it is only necessary to consult the job analysis already made. The weakness of this method is that the conditions of the job may have been changed between the time the analysis was made and the time the data are needed.

2. **Making a Job Analysis for a Specific Predetermined Purpose.**—By this method only those factors of the job relating to the predetermined purpose are analyzed and recorded. Under this type we may—among many others—make job analyses:

(*a*) For studying production processes, so that they may be improved.

(*b*) For establishing training and educational programs.

(*c*) For discovering the one best type of person to do that job.

(*d*) For setting rates, wages, rewards, and incentives.

(*e*) For discovering the cause for high labor turnovers.

(*f*) For discovering the advantages and disadvantages of the job, entrance requirements, rates of promotion, etc.

In making this classification it is recognized, then, that special job analyses may be made for any particular purpose.

## STEPS IN THE MAKING OF JOB ANALYSES

The making of job analyses calls for special training and skill and for considerable tact and diplomacy. The steps should be as follows:

1. **Definitely decide what job or jobs are to be analyzed** and define specifically the purpose of the analysis. (In this case it would be to discover and record all the advantages,

disadvantages, limitations, requirements, and conditions of the job as a career or as a step in a career.)

**2. Prepare a form** covering the elements about which it is desired to obtain information. (A suggested form is presented on the following pages.)

**3. Prepare the foremen, supervisors, and workers** for the process of analyzing their jobs and collecting data. This is important, as it is necessary to secure the cooperation, understanding, and sympathy of the people concerned in making these job analyses. (This would not be so necessary in the present case, as most of the contacts will be with friends and relatives who are workers.)

**4. Define the Job.**—This will ordinarily not be an easy matter. In the majority of jobs which require analysis, it will be found that the job is not strictly defined. Along with the definition of the job we should get the terminology of the job, that is, the names by which it is known; then we should definitely determine upon the official title, or which of the several names is to be retained officially.

In general, the elements of a job about which it will be necessary to secure information for a complete job analysis will be found to be as follows:

### Chart 32.—Job Analysis for Industrial Purposes

A. *The Job*

1. Definition and terminology..........
2. Description..........
3. Tools used..........
4. Machinery used..........
5. Appliances used..........
6. Materials..........
7. Type of motions..........
8. Posture..........
9. Time..........
10. Supervision..........
11. Orders and instructions..........
12. Wages: starting, medium, limit..........
13. Standards of work: quality, quantity..........
14. Seasonal..........
15. Entrance requirements..........

B. *Job in Sequences*

1. Preceding and succeeding operation..........
2. Promotion sequence..........
3. Alternative jobs..........

CHART 32.—(*Continued*)

*C. Personnel Qualifications for Success on the Job*

1. Height and weight ........................................
2. Age ........................................
3. Sex ........................................
4. Nationality ........................................
5. Strength ........................................
6. Movements ........................................
7. Education—general ........................................
8. Special training ........................................
9. Special senses ........................................
10. Energy ........................................
11. Endurance ........................................
12. Intelligence level ........................................

*D. Health*

1. Occupational diseases ........................................
2. Accident hazards ........................................
3. Fatigue ........................................
4. Sanitation ........................................

*E. Industrial Relations*

1. Unions—regular or company
2. Employee associations ........................................
3. Collective bargaining ........................................
4. Employee representation ........................................
5. Education, recreation, welfare ........................................

*F. Legal Phases*

1. Labor Law ........................................
2. Factory inspectors ........................................
3. State Departments of Labor ........................................
4. School permits ........................................
5. Minimum wage ........................................
6. Workmen's compensation ........................................
7. Prohibited occupations ........................................
8. Prohibited machinery ........................................

## THE MECHANICAL AND HUMAN DIVISIONS

It will be seen from the above that job analysis has two broad divisions: (1) mechanical, (2) human.

Under (1), mechanical, we have the following:

(*a*) Operations, processes, and relation to other jobs.
(*b*) Materials used.
(*c*) Equipment, machinery, and tools.
(*d*) Conditions of work.
(*e*) Methods of work.

Under (2), human, we have:

(*a*) The individual worker.
(*b*) Training experience.
(*c*) Education and intelligence.
(*d*) Supervision, direction, instruction.
(*e*) Remuneration—incentives.
(*f*) Opportunities for promotion.
(*g*) Alternative jobs.

It will readily be seen that at present we have no one general book on vocational information which presents the elements of jobs or vocations in such detail as this, neither is it probable that we will ever have such a book, or even a set of books.

### THE OBJECTIVE OF JOB ANALYSIS IS JOB SPECIFICATIONS

As has been stated before, job analysis is merely a means to an end—not the end in itself. The end or objective of job analysis is job specification. From the information obtained by the analysis, we should be able to draw up job specifications to be used for hiring, training, setting of rates, establishing promotion sequences, and other similar standards. These specifications are nothing more nor less than a statement of the kind of person that will be most successful in that particular job.

The operation of making a job analysis is a good illustration of the application of several principles of efficiency: (1) The collecting of exact data, (2) the recording of these data, (3) the using of these data for the establishment of standards, which in this case are called "job specifications," drafted for the purpose of establishing the desirability or undesirability of a job or jobs for any particular individual or groups.

### THREE STANDARD FORMS OF JOB SPECIFICATIONS

There are, in general, three types of job specifications more or less related to each other and over-lapping in some respects. No. 1 is the *essay form of job specification.* This is the method used in drawing up trade specifications and compiling the occupational index in the United States Army and the United States Department of Labor. The following are illustrations taken from the Trade Specifications and Occupational Index of the United States Army.[5]

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[5] *Army Trade Specifications and Index,* United States Army, Government Printing Office, Washington, D. C., 1918, p. 67.

## UNITED STATES ARMY JOB SPECIFICATIONS

CARPENTER, EXPERT
CANUA (code symbol)

*Duties:*

1. Supervision and general construction of wooden buildings of any character for any purpose.

*Qualifications:*

2. Must be thoroughly experienced all-round carpenter on house building or general frame construction.

Should be able to estimate quantities and be capable of working to drawings and sketches and laying out general work.

Must be familiar with framing and building of frame warehouses, barracks, or sheds, and supervising carpenter construction work of any character.

Should be a competent inside worker, able to hang sashes, doors, and blinds, lay flooring and shingles, and should have a practical knowledge of stair building and builders' hardware.

Should have a thorough working knowledge of all carpenter tools and some experience with wood-working machinery.

Having had broad experience as foreman carpenter on large operations, factory or building construction, or as house carpenter, contracting builder, or carpenter.

*Substitute Occupations:*

3. Foreman Carpenter, Boss Carpenter, Contractor, Builder.

EMPLOYMENT MANAGER[6]
EAYWI (code symbol)

*Duties:*

1. Supervising the classification, selection, and distribution of labor of any kind.

*Qualifications:*

2. Must be a thoroughly experienced personnel supervisor, with a broad knowledge of the training, experience, and personal qualifications required for the various trades and professions.

Must be a skilled judge and analyzer of character and a thoroughly trained interviewer, with a thorough knowledge of modern methods of vocational selection and distribution.

Must be capable of efficiently handling all office records and applications or other forms pertaining to employment and handling all details of hiring and dismissing.

Must have had similar experience in any large manufacturing organization or business concern of any kind employing large numbers.

*Substitute Occupations:*

3. Personnel supervisor, employment agent, welfare worker, safety engineer.

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[6] *Ibid.*, p. 103.

Notice that here there is little of the information that a guidance adviser needs or that the student needs.

## UNITED STATES DEPARTMENT OF LABOR JOB SPECIFICATIONS[7]

In the United States Department of Labor we have the following form of job specifications:

BLACKSMITH—GENERAL (Code symbol)—BEET

*Description:* The general blacksmith does light and medium-size forging and general anvil work on production and repairs.

*Qualifications:* The general blacksmith must be able to work from drawings, samples, or templates, and do any medium or light-size forging, including drawing, bending, upsetting, and welding. He should be able to do ordinary tempering, using water, oil, or air, and be able to direct the work of helpers. He should have had at least an equivalent of an apprenticeship in a general blacksmithing shop. It is desirable that he understand oxy-acetylene and thermite welding.

*Schooling:* Common school.

MECHANICAL DRAFTSMAN (Code symbol)—MAT

*Description:* The duties of the mechanical draftsmen are to make drawings of machines from sketches or from data furnished by the designer.

*Qualifications:* He must use skillfully the tee square, triangle, full set of drawing instruments, and protractor, and must understand the relation of the views of mechanical drawings and must be able to make layouts and developments, such as are used in sheet-metal work. He must be familiar with the common stocks of material, such as bolts, nuts, washers, and common sizes of stock iron and steel rods and bars, and familiar with the standard types and sizes of drill taps, dies, reamers, and gear cutters. He must understand mathematics and mechanics, so that he can make all calculations, layouts, and developments, and know something of the principles of the strength of materials. He should be familiar with the use of reference books, such as handbooks and catalogues. He should know the shop terms, such as drill, ream, tap, bore, grind, taper, face, and finish. He should know foundry- and pattern-room notations and be familiar with all drawing conventions. He should be 18 years of age or over; should have good health and exceptionally good eyesight.

He should have had experience as a tracer and detailer, and preferably one to two years' machine shop experience.

*Schooling:* Not less than two years in high school or the equivalent, preferably trade school or technical high school.

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[7] *Descriptions of Occupations*, United States Department of Labor, Government Printing Office, Washington, D. C., 1918, pp. 5 and 23. See "Job Specifications," *Bull.*, No. 45, Employment Management Series, No. 3, Federal Board for Vocational Education, Washington, D. C.

Here we find a little more of the kind of information that the guidance adviser needs. These forms tell us about age, health, experience, and schooling.

It is difficult, however, to use the essay form of job specifications rapidly or accurately. It is necessary to read and retain all that has been said in the essay. If one writes or uses many of these essay job specifications, one finds that he begins to use a certain form of essay and underlines certain parts of that essay. This is the beginning of the second form, which is the outline.

### THE OUTLINE FORM OF JOB SPECIFICATIONS[8]

The outline form of job specifications is given below. It is used frequently for drawing up personnel specifications for a particular job.

1. *General description of the job:*
    Duties, responsibilities, product.
    ·Official name of the job.
    Code word, symbol, or number of the job.
    Department in which job is located.
    The product of the job.
2. *Materials used on the job:*
    Are they standardized, heavy, or light?
3. *Tools, machines, and equipment:*
    Control of power.
    Speeds, gigs, and fixtures.
    Tool sharpening.
4. *Motions*—simple or complex, standardized, rhythmical or not, repetitional or not.
5. *Posture*—standing, sitting, walking, bending, lifting, climbing, reaching.
6. *Physical conditions* of the job—light, heat, ventilation, cleanliness, sanitation, noise, hazards.
7. *Wages*—What system of wage payment? Starting, advancing, limits?
8. *Time*—Overtime, shifts, lay-offs, vacations, meal intervals, hours—day or night—rest period.
9. *Supervision,* directions, training.
10. *Promotion*—by wages, by jobs.
11. *General education* required.
12. *Length of learning* period.
13. *Intelligence level*—exceptional aptitudes.
14. *Routine or diversified job.*

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[8] For an illustration of the outline form with a different set of headings see BERRY, R. E., "The Work of the Juniors in the Telegraph Service," *Bull.*, No. 7, Part-time Education Series, No. 10, The University of California, Division of Vocational Education, Berkeley, Cal., 1922.

15. *Community situation.*
16. *Work with others or alone.*
17. *Physical qualifications and limitations.*
18. *Chief source of labor supply.*

This brings us to the next logical step, which is the questionnaire form of job specification, the type we propose to use.

### THE QUESTIONNAIRE FORM OF JOB SPECIFICATION

The essay and the outline forms of job specifications require that some one person shall go to that job to obtain the information necessary. This is not always convenient nor necessary. The questionnaire form removes this necessity. Instead, the questionnaire is handed to the supervisor or foreman in charge, who is asked to fill out the form given to him. This form is as follows:

I. Name of job........................................
   Division........................................
   Company or department........................................

II. Description of job (check description below):
   Night work........................................
   Day work........................................
   Alternate day and night........................................
   Time work........................................
   Piece work........................................
   Bonus work........................................
   Standing........................................
   Walking........................................
   Sitting........................................
   Bending........................................
   Lifting........................................
   Permanent........................................
   Temporary........................................
   Routine........................................
   Diversified........................................
   Outline of duties........................................

III. Check the following personal requirements of applicant for job:
   Age:
      Old (50–65)........................................
      Middle-aged (25–50)........................................
      Young (18–25)........................................
   Sex:
      Male........................................
      Female........................................

Weight:
  **Heavy** (180–250 pounds)..........
  Medium weight (140–180 pounds)..........
  Light (115–140 pounds)..........

Height:
  Tall (5 feet 11 inches)..........
  Medium height (5 feet 7 inches to 5 feet 11 inches)..........
  Short (5 feet to 5 feet 7 inches)..........

Strength:
  Strong..........
  Medium strength..........
  Slight..........
Agile..........
Phlegmatic (slow-moving)..........
May be crippled..........
Right-handed..........
Left-handed..........
Use both hands..........
Nimble fingers required..........
Nimble fingers not required..........
Good vision required..........
Good vision not required..........

Education:
  None required..........
  Common school required..........
  High school..........

Intelligence:
  Little required..........
  Ordinary intelligence required..........
  Superior required..........

English:
  Must talk and read..........
  Understand broken English..........
Works with others..........
Alert-mindedness required..........
Slow-minded type best..........
Experienced desired:..........
..........

IV. Range of wages:..........
  Highest wage per hour..........
  Lowest wage per hour..........

This type of specification would certainly be much more valuable to the adviser than either of the two preceding types.

## A PROPOSED METHOD FOR THE COLLECTION AND DISSEMINATION OF VOCATIONAL INFORMATION IN THE PUBLIC SCHOOLS, BASED ON THE QUESTIONNAIRE FORM OF JOB ANALYSIS

1. Present practices make use of vocational information in book form, such as Gowin and Wheatley and Brewer's *Occupations*, Filene's *Careers for Women*, Weaver's *Medicine as a Profession*, and other similar material in fixed and static form.

2. This material, because of its manner of collection and its static form, must necessarily soon become out-of-date, and therefore more or less inaccurate, and even when compiled may not be true for all localities.

3. As an educative process, this method of disseminating vocational information leaves much to be desired. The student adopts much the same attitude toward a book on vocational information as he would toward any other kind of book. It is simply another book in a long series of books. The following method is based upon the project method and all the values of that method are claimed for it:

(*a*) The following outline should be mimeographed and distributed to classroom teachers, and then, with explanations and instructions, given to each student in the class, group, grade, or school. The students should take the outline home and, by establishing contacts—preferably in their own family, or among their neighbors or friends—collect the information called for on the outline. In some classes where sufficient time is available and the students are mature enough, it may be well for the teacher to redevelop the outline with the class.

(*b*) The students are then to return the outline at a specified time to the teacher. The teacher will collate them by vocations and send them to the office of the director of vocational guidance.

(*c*) The director or his assistants will draw off onto a master sheet the information concerning one definite vocation, indicating, if desirable, the range of certain items, such as salaries, length of training, etc. This should be done for all the vocations concerning which information has been collected.

(*d*) These master sheets should then be mimeographed, put into a loose-leaf cover, and returned to the teacher, they will thus form a source of vocational information, to be distributed to the pupils by the teacher and available at any time to the student.

(*e*) This entire process should be gone through at least twice a year, in this way keeping the information up-to-date and gradually building up data on a variety of occupations. The teachers should keep the loose-leaf books and the director of vocational guidance should send additional leaves or new leaves to be substituted for discarded leaves as occasion arises.

### JOB ANALYSIS OUTLINE TO SECURE VOCATIONAL INFORMATION FOR USE IN VOCATIONAL GUIDANCE IN THE PUBLIC SCHOOLS

Student.............................Date...........................
School..............................Grade or Group................
Teacher..........................

I. *Description of Occupation:*
(*a*) Common name of occupation?..............................
(*b*) Other names, if any?.........................................
(*c*) What does worker do?.......................................
..................................................................
(*d*) Is job increasing in importance?............................
(*e*) Is job decreasing in importance?............................
(*f*) Becoming more specialized?..................................
(*g*) Becoming more localized?....................................
(*h*) Becoming more machinized?...................................
(*i*) Is it seasonal?...............What seasons?.................
(*j*) Do workers change often?..............Why?..................
(*k*) Is it a stepping stone to something better?..................
If so, what?.......................................................

II. *Physical Conditions*·
(*a*) Inside work?...................................................
(*b*) Outside work?..................................................
(*c*) Temperature?...................................................
Normal?...........................................................
Variable?.........................................................
Moist air?........................................................
Dry air?..........................................................
Hot?..............................................................
Cold?.............................................................

(*d*) Ventilation:
Good?.............................................................
Fair?.............................................................
Poor?.............................................................
Gas?..............................................................
Fumes?............................................................
Odors?............................................................
Dust?.............................................................

(*e*) Noise:
Disturbing?.......................................................
Steady?...........................................................

Irregular?..........................................
No noise?..........................................
Vibrations?..........................................

(*f*) Light:
Natural?..........................................
Artificial?..........................................
Localized?..........................................
Flood light?..........................................
Dim?..........................................
Bright?..........................................

(*g*) Sanitary Conditions:
Good?..........................................
Poor?..........................................
Variable?..........................................

III. *Personnel Conditions:*

(*a*) Close to other workers?..............................
(*b*) Cooperate with other workers?..............................
(*c*) Closely supervised?..............................
(*d*) Nerve strain?..............................
(*e*) Eye strain?..............................
(*f*) Hazards?..............................
(*g*) Belong to union?..............................
(*h*) Not belong to union?..............................
(*i*) Union preferred?..............................
(*j*) Employees' associations?..............................
(*k*) Welfare workers?..............................
(*l*) Medical service?..............................

IV. *Personnel Requirements:*

(*a*) Entrance requirements:
Age?..........................................
Sex?..........................................
Religion?..........................................
Nationality?..........................................
Height?..........................................
Weight?..........................................
Strength?..........................................
Training required for entrance?..............................
On the job?..........................................
In some school?..........................................
School grade required for entrance?..............................
Intelligence required for entrance?..............................
Supply own tools?..........................................
Special clothing?..........................................
Special physical requirements?..............................
Special physical limitations?..............................

V. *Working Conditions:*

- (*a*) Work with machinery?
  - High-speed?
  - Automatic?
  - Jigs?
- (*b*) Work with tools?
  - Hand tools?
  - Light?
  - Heavy?
- (*c*) Work with materials?
  - Heavy?
  - Light?
  - Standardized?
  - Variable?
- (*d*) Motions.
  - Simple?
  - Complex?
  - Fast?
  - Slow?
  - Repetitive?
  - Rythmic?
  - Large?
  - Small?
  - Short-cycle?
  - Large-cycle?
- (*e*) Posture:
  - Sitting?
  - Standing?
  - Moving?
  - Bending?
  - Reaching?
  - Variable?
- (*f*) Product:
  - Is quantity standardized?
  - Is quality standardized?
  - Do quality and quantity depend entirely on worker?
  - Do quantity and quality depend entirely on machine?
  - Does product vary continually?
  - Does product vary occasionally?

VI. *Working Hours:*

- Length of working period?
- Day work?
- Night work
- Meal hours
- Rest periods

*Overtime?*..........................................
*Vacations*...........................................
*Lay-offs*............................................
*Steady work?*........................................
*Rush periods*........................................
Slack periods.........................................

VII. *Pay:*

Beginning.............................................
Median................................................
Maximum...............................................
Hour, day, month, basis...............................
Piece work............................................
Bonuses...............................................
Premiums..............................................
Dockage...............................................
Profit sharing........................................
Vacation pay..........................................
Sick benefit..........................................
Accident compensation.................................
Pensions..............................................

VIII. *Promotion and Learning Possibilities:*

Any on this job?......................................
Next best jobs?.......................................
Must study for promotion?.............................
  Evening school......................................
  Correspondence courses..............................
  Full-time school....................................
  Study books or magazines............................
  Part-time classes...................................
  Corporation classes.................................
  Apprenticeship classes..............................
  Union classes.......................................
  Training classes in plant...........................
How soon may promotion be expected?...................
Is promotion dependent on further study?..............
Is promotion dependent mainly on hard work and good behavior?
......................................................
Is promotion dependent mainly on length of service?...

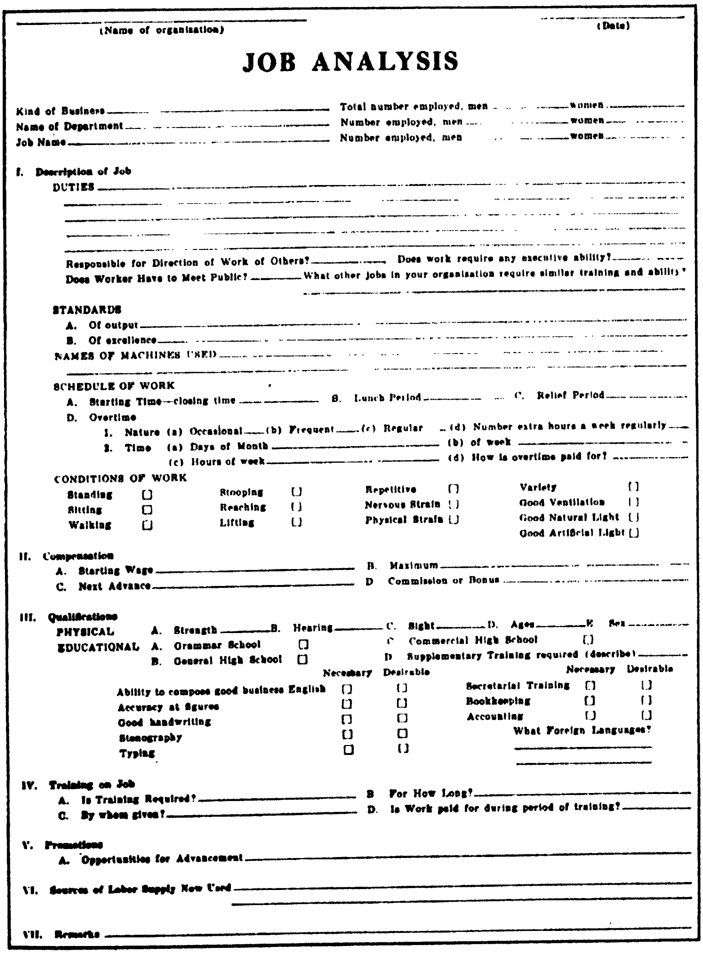
IX. *Labor Laws and Requirements Affecting the Job:*

Child Labor Laws......................................
Forbidden machines, operations........................
Safety first..........................................
Factory inspectors....................................
Compensation..........................................
Accident..............................................
Minimum wage..........................................

Union requirements. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
Employers' association requirements. . . . . . . . . . . . . . . . . . . . . . . .
Apprenticeship agreements. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .

The following job analysis card was developed and used by the workers of the Girls' Vocational Adjustment Bureau of New York City in an endeavor to obtain information about the jobs that would enable the placement officer to place the individual more advantageously.

Chart 33



(Name of organization) (Date)

JOB ANALYSIS

Kind of Business ______ Total number employed, men ______ women ______
Name of Department ______ Number employed, men ______ women ______
Job Name ______ Number employed, men ______ women ______

I. Description of Job
DUTIES ______
Responsible for Direction of Work of Others? ______ Does work require any executive ability? ______
Does Worker Have to Meet Public? ______ What other jobs in your organization require similar training and ability?

STANDARDS
A. Of output ______
B. Of excellence ______
NAMES OF MACHINES USED ______

SCHEDULE OF WORK
A. Starting Time—closing time ______ B. Lunch Period ______ C. Relief Period ______
D. Overtime
1. Nature (a) Occasional ______ (b) Frequent ______ (c) Regular ______ (d) Number extra hours a week regularly ______
2. Time (a) Days of Month ______ (b) of week ______
(c) Hours of week ______ (d) How is overtime paid for? ______

CONDITIONS OF WORK

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Standing | ☐ | Stooping | ☐ | Repetitive | ☐ | Variety | ☐ |
| Sitting | ☐ | Reaching | ☐ | Nervous Strain | ☐ | Good Ventilation | ☐ |
| Walking | ☐ | Lifting | ☐ | Physical Strain | ☐ | Good Natural Light | ☐ |
| | | | | | | Good Artificial Light | ☐ |

II. Compensation
A. Starting Wage ______ B. Maximum ______
C. Next Advance ______ D Commission or Bonus ______

III. Qualifications
PHYSICAL A. Strength ______ B. Hearing ______ C. Sight ______ D. Ages ______ E Sex ______
EDUCATIONAL A. Grammar School ☐ C Commercial High School ☐
B. General High School ☐ D Supplementary Training required (describe) ______

| | Necessary | Desirable | | Necessary | Desirable |
|---|---|---|---|---|---|
| Ability to compose good business English | ☐ | ☐ | Secretarial Training | ☐ | ☐ |
| Accuracy at figures | ☐ | ☐ | Bookkeeping | ☐ | ☐ |
| Good handwriting | ☐ | ☐ | Accounting | ☐ | ☐ |
| Stenography | ☐ | ☐ | What Foreign Languages? | | |
| Typing | ☐ | ☐ | | | |

IV. Training on Job
A. Is Training Required? ______ B For How Long? ______
C. By whom given? ______ D. Is Work paid for during period of training? ______

V. Promotions
A. Opportunities for Advancement ______

VI. Sources of Labor Supply Now Used ______

VII. Remarks ______

## CONCLUSIONS

This method of collecting and disseminating occupational information has been carried to the point where we feel justified in drawing the following conclusions:

1. That there is available within any student body and their groups nearly all the information concerning occupations that that body itself needs, that is, that they already know or can find out under proper guidance that which they need to know concerning the occupations.

2. That the information secured by these students through this project-laboratory method is much more valuable and reliable than that secured by any other feasible method.

3. That there is a decided educational value in the active participation of the students in collecting this information. It has all the values of the project method, places the student in a real situation, and gives him a point of view that is not obtained by the book method followed in occupational information classes.

4. That the students develop a real and sincere interest in their own projects and in the class projects as a whole.

5. That this method, valuable as it is, should be supplemented by further reading, visits, etc.

6. During the progress of this project the teacher should supplement the work of the students by making analyses of personal traits, major characteristics, educational attainments in terms of school subjects, physical requirements, limitations, etc., that are necessary for success in certain occupations, or that preclude any chance of success on some other occupation.

7. That if the class in occupational information continues throughout the year, each student in the class should make several of these investigations, until he has developed a clear conception of the method of studying an occupation and also a clear method of evaluating the advantages and disadvantages, the requirements for entrance, opportunities for promotion and progress, and the varying types of rewards to be found in each occupation.

8. This method provides material that is clearly within the grasp of the student, and, in addition, the nature of the questions in the outline and the method of investigation arouse the interest of the student and make him a part of the real situation in a way that merely studying a book on occupations would not do.

9. When the student is called upon to make reports to the class, it is an intensely personal matter with him. He is not merely reproducing cut-and-dried fact knowledge which he has memorized from a book, but the information which he gives to the class is personal to him, he appreciates its significance, and is anxious that the class shall likewise appreciate the value of what he has discovered.

10. In general, it will be found that certain portions of the job analysis outline will need to be explained quite carefully to the class. This is particularly true of nearly all the items under "V, Working Conditions." The same may be said concerning "IX, Labor Laws and Requirements Affecting the Job."

11. Before attempting to use this method, the teacher should go through the process at least once with some job with which he or she is not acquainted.

## CASE PROBLEM

### A Lecture on the Vocations

A request has come from a social worker in a Neighborhood House on the East Side of New York City to have someone, not an expert in one vocation, tell a group of boys and girls having their monthly mass meeting all about the vocations, particularly with reference to opportunities open to them in New York City. These young people are of Italian, German, and Jewish parentage. The majority are high school students. The request states that it is desirable that these young people know something of the occupations so that they shall not select the easiest road open to them.

### Questions

1. What specific items of value to the adviser are given in the above?
2. What other items would be necessary for complete guidance? For a lecture on the vocations?
3. What part of a guidance system is this lecture on the vocations?
4. Is the group a selected homogeneous group? If so, what factors functioned as selection?
5. What type of guidance is this?
6. What is its chief value?
7. Draft an outline for such a lecture.
8. What should be your attitude to such sporadic attempts at guidance?
9. What level of intelligence is indicated?
10. Which do they need most, vocational information or educational information? Which first?
11. Where would you get the information you would give this group?

## CHAPTER XVII

# SOURCES OF INFORMATION FOR THE VOCATIONAL GUIDANCE ADVISER

When organizing a system of vocational guidance for either large or small groups, it is absolutely necessary that the organizer so organize the system, and establish such contacts with outside agencies and with organizations in related fields, that there will automatically come to him all kinds of information that is necessary if his work is to be thorough and efficient. These sources of information may be classified under five main heads:

1. General information and statistics.
2. Information concerning the student.
3. Information concerning the vocations.
4. Information concerning educational opportunities.
5. Legal requirements.

These will now be developed in detail.

### I. GENERAL INFORMATION

**1. Government Bulletins.**—Among the chief sources of general information are Government bulletins, such as those of the Census Bureau, the United States Health Service, especially the United States Department of Labor and its various bureaus, the Children's Bureau, the Bureau of Labor Statistics, the Women's Bureau, the United States Employment Service, the United States Junior Employment Service. The publications of the United States Bureau of Education and the Federal Board for Vocational Education should also be read, studied, and filed.

**2. The publications of the various State Departments of Labor,** particularly one's own state, those of the various State Industrial Commissions, Minimum Wage Commissions, the State Industrial Directories, Poole's Industrial Directory, and the publications of the American Federation of Labor should be available.

**3. Philanthropic and Research Organizations.**—Valuable information can be secured by having the name of the Director of the Guidance Bureau placed upon the mailing lists of all of the above organizations and also such philanthropic and research organizations as the Vocational Bureau, Graduate School of Education, Harvard University, the Research Department of the College of Education, University of California, the University of Wisconsin, and other similar institutions. There are also a number of philanthropic organizations, such as the White-Williams Foundation, Philadelphia; the Employment Service for Juniors, New York City; the Schmidlapp Bureau, Cincinnati; the National Committee of Bureaus of Occupations, New York City; and The National Child Labor Committee, New York City—all of whose publications furnish valuable information of a general character to the workers in this field.

It is not enough that these publications be obtained. The organizer of a guidance system should index and file all publications received. Such bulletins as the above are practically valueless unless they are classified, indexed, and filed in such manner that the information they contain is readily available when occasion requires. In fact, it is much better to cut out pages and file them under a topical index than merely to store away the bulletins on shelves.

## II. CONCERNING THE STUDENT

1. **The school attendance department** in large systems, or the superintendent's office in smaller systems, should be able to furnish the vocational guidance adviser such information as the total number of pupils of a certain age, where they are located by grades and by schools, the total number of pupils of a certain age in a certain grade, whether a certain student is regular or irregular in attendance, the ages of all students, places of birth, races, nationalities, progress in school, their addresses, their school history, the occupation of the parents, statistics of the family, record of any delinquencies, etc.

If the school attendance department cannot furnish the above information, then it becomes necessary for the director of vocational guidance to collect it or develop some source or method whereby it may be obtained. In many of the smaller school systems it may be a good plan if the person in charge of the guidance system is also in charge of the attendance, census, record, truancy department and, provided they are sufficiently trained, in charge of the research department. Many small-city and town systems will not be able to maintain a full-time director of guidance and in such cases a combination of positions is advisable.

2. **The school census,** which, in most states and cities is taken each year under the School Law, should furnish the guidance adviser such facts as the total number of children of school age, the total number of children of a certain age, the total number in a certain district, the total number of children with parents earning their living at certain occupations, whether their parents are living or dead, who their legal guardians are, whether they have step-parents. It should also furnish the total number of children by sex, by color, or by nationality, for any age or locality.

A well-kept or well-organized attendance department and an efficient school census are of great value to the vocational guidance department. If these services are not well organized and efficient, then it becomes a problem for the director of vocational guidance to develop and prove the necessity for this information and find some means of obtaining it.

3. **Information Obtained from the Teachers' Grades.**—At the present time the scientific methods in education, particularly in the field of educational statistics, leave us feeling quite skeptical concerning the validity or reliability of teachers' grades in general, and of certain teachers' grades and of certain subject grades in particular.

Concerning this question, Dr. Fretwell says:

> In this study, academic success in the first year of the Junior High School was more successfully predicted by a group of standardized tests than by all previous school marks, or age, or teachers' estimates.[1]

However, this is neither the time nor the place to go into discussion of the reliability of teachers' grades. It is sufficient for us to recognize the value in guidance of a teacher's mark given to a certain student as a measure of ability in a list of school subjects, such as reading, spelling, grammar, arithmetic, geography, history, shop, drawing, penmanship, etc. The difficulty comes when studying the marks given to the same pupil in various subjects by various teachers. We have no means of knowing whether or not these teachers are using the same scales, criteria, or standards for measuring the quality of the work, or whether or not they are attempting to conform to the normal curve of distribution of marks. This serious difficulty is, of course, in a large measure obviated if the grades given to the student are based upon the results of standardized achievement tests, such as the Courtis Arithmetic Tests, the Ayres or Thorndike Handwriting Scale, the Van Wagenen History Scales, Thorndike Spelling Scales, or the approximately two hundred similar achievement tests of varying degrees of validity.

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[1] FRETWELL, E. K., *A Study in Educational Prognosis*, Teachers College, Columbia University, New York. See also, STARCH, D., *Educational Measurements*, The Macmillan Company, New York, 1916, pp. 3–15.

**4. Teachers' Estimates.**—Although they should be obtained, little significance should be attached to *teachers' estimates* on behavior, deportment, reliability, industriousness, initiative, neatness, or effort. No scale has been established for these, and an individual might quite conceivably be reliable and industrious in some one thing but quite unreliable in another, depending upon his interests in, and attitude toward, the particular thing concerning which his reliability and industriousness are being estimated. The same might well be said about the other vague items commonly found on the usual teacher's report card.

**5. The teachers' impressions,** then, should be collected, but not accepted, as of great importance. It has been proved beyond doubt that teachers are poor judges of intelligence, that their impressions of effort and industriousness are based entirely from the results accomplished rather than the effort put forth; in fact, they have no means of judging the effort except by the results obtained.

Likewise, a teacher's impressions of personality are of little value. We have no generally accepted definition of personality, neither have we any standardized and accepted measure of personality. If a group of 25 teachers were asked to define personality, to analyze the elements which make up an individual's personality, and then to arrange a scale of personality of 20 people with whom they were all acquainted, in the order of degree of personality, it would be found that there is no common denominator concerning personality in the minds of any considerable group of teachers. So, while this information should be collected, it should not be taken too seriously.

**6. Psychological Examinations.**—The information obtained from *psychological examinations* is of much more importance. These psychological examinations should be given first of all to groups, by means of some of the standardized group intelligence tests. These tests should then be followed up by individual intelligence tests, given to those who have made low scores in the group intelligence tests. All pupils should then be classified according to one of the following classifications:

TABLE XXIX.—TERMAN'S CLASSIFICATION[2]

I.Q. = Intelligence Quotient 110+ = Superior
Intelligence Quotient 100+ = Above normal
Intelligence Quotient 90 -100 = Normal
Intelligence Quotient 80 - 90 = Dull
Intelligence Quotient 70 - 80 = Border-line
Intelligence Quotient 50 - 70 = Moron
Intelligence Quotient 20 - 50 = Imbecile
Intelligence Quotient below 20 = Idiot
Intelligence Quotient below 70 = Definite feebleminded.

TABLE XXX.—CLASSIFICATION OF AMERICAN ASSOCIATION FOR THE STUDY OF THE FEEBLEMINDED

M.A. = Mental Age 7-12 Morons
Mental Age 2- 7 Imbeciles
Mental Age below 2 Idiots

TABLE XXXI.—ARMY ALPHA CLASSIFICATION[3]

Score (not I.Q.) = 135-212 = Mark A = Very superior
Score (not I.Q.) = 105-134 = Mark B = Superior
Score (not I.Q.) = 75-104 = Mark C+ = High average
Score (not I.Q.) = 45- 74 = Mark C = Average
Score (not I.Q.) = 25- 44 = Mark C− = Low average
Score (not I.Q.) = 15- 24 = Mark D = Inferior
Score (not I.Q.) = 0- 14 = Mark D− = Very inferior

TABLE XXXII.—KUHLMANN'S CLASSIFICATION[4]

I.Q. 175+ = Precocious
I.Q. 150-174 = Very superior
I.Q. 125-149 = Superior
I.Q. 115-124 = Very bright
I.Q. 105-114 = Bright
I.Q. 95-104 = Average
I.Q. 85- 94 = Dull
I.Q. 75- 84 = Border-line
I.Q. 50- 74 = Morons
I.Q. 25- 49 = Imbeciles
I.Q. 0- 24 = Idiots

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[2] See TERMAN, L. M., *The Measurement of Intelligence*, Houghton Mifflin Company, New York, 1916.

[3] See YOAKUM and YERKES, *Army Mental Tests*, Henry Holt & Company, New York, 1920, p.17.

[4] KUHLMANN, F., *A Handbook of Mental Tests*, Warwick and York, Baltimore, Md., 1922.

Halley gives the following percentage distribution of I.Q.'s for 2,030 children.

TABLE XXXIII.—HALLEY'S PERCENTAGE DISTRIBUTION OF INTELLIGENCE QUOTIENTS[5]

I.Q. = 150–159 = Percentage of pupils = 0.2
I.Q. = 140–149 = Percentage of pupils = 1.0
I.Q. = 130–139 = Percentage of pupils = 4.0
I.Q. = 120–129 = Percentage of pupils = 11.4
I.Q. = 110–109 = Percentage of pupils = 22.9
I.Q. = 100–109 = Percentage of pupils = 26.3
I.Q. = 90– 99 = Percentage of pupils = 19.7
I.Q. = 80– 89 = Percentage of pupils = 8.9
I.Q. = 70– 79 = Percentage of pupils = 4.0
I.Q. = 60– 69 = Percentage of pupils = 1.4
I.Q. = 50– 59 = Percentage of pupils = 0.5

*The M.A., I.Q., A.Q., E.Q.*—By using in formulas the results of these psychological tests with the results of achievement or subject tests the following quotients and ages may be obtained:[6]

M.A. = Mental age as indicated by the test score

$$\text{I.Q.} = \frac{\text{M.A.}}{\text{C.A.}} = \frac{\text{Mental age}}{\text{Chronological age}} = \text{Intelligence quotient}$$

$$\text{S.Q.} = \frac{\text{S.A.}}{\text{C.A.}} = \frac{\text{Subject age}}{\text{Chronological age}} = \text{Subject quotient}$$

$$\text{A.Q.} = \frac{\text{E.A.}}{\text{M.A.}} = \frac{\text{Educational age}}{\text{Mental age}} = \text{Accomplishment quotient}$$

$$\text{E.Q.} = \frac{\text{A.Q.}}{\text{I.Q.}} = \frac{\text{Accomplishment quotient}}{\text{Intelligence quotient}} = \text{Efficiency quotient}$$

NOTE.—For a description of the methods used in finding the A.A., or anatomical age, see PRESCOTT, A. D., *The Determination of Anatomical Age in School Children and Its Relation to Mental Development*, Series 1, No. 5, Studies in Educational Psychology and Educational Measurement, Graduate School of Education, Harvard University, Cambridge, Mass., July, 1923.

**7. The medical department of the schools** should furnish valuable information to the vocational guidance adviser. It should have on file a record of the physical limitations and defects of all students—also their health records. If this information is not already on file or up-to-date, it should be obtained by sending the students to the medical or health department, with a request for examination. The medical department should also be able to give information concerning the sex habits of any student, and in many cases will be able to make, or have made, a psychiatric examination and report on students sent to them.

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[5] See HALLEY, C. E., "Mental Tests for School Use," *Bull.*, 17, No. 28, University of Illinois, Champaign, Ill.

[6] See STEBBINS and PECKSTEIN, "Quotients I.E. and A," *Journal of Educational Psychology*, vol. xiii, No. 7, Oct., 1922. Also, MACPHAIL, A. H., "The Correlations between the I.Q. and the A.Q." *School and Society*, vol. xvi, No. 412, November 18, 1922. Also, MURDOCK, R., "The Accomplishment Quotient: Finding It and Using It," *Teachers College Record*, vol. xxiii, May, 1922.

8. **The school nurse** is a valuable aid to the vocational guidance counselor, especially if she makes visits to the students' homes. She can give information concerning the home conditions and personal habits which in many case will prove to be the solution of many a perplexing problem.

9. **The Visiting Teacher.**—A goodly proportion of school systems now have a visiting teacher or home visitor.[7] They are of valuable assistance to the vocational guidance department. They can furnish the vocational guidance adviser with information concerning the home conditions, family relationships, mental attitudes, physical environment, psychological environment, and economic conditions of students.

10. **The Associated Charities.**—If the city is large enough, it will have the Associated Charities, and possibly the Council of Social Agencies, with a Confidential Exchange. In many cases these organizations can furnish information about the family and the environment of particular students which is extremely valuable.

11. **Questionnaire Survey.**—Another source of valuable information is revealed by the questionnaire survey. A mimeographed sheet should be given to all pupils in a certain school, in a certain grade or locality, or to students of a certain age, asking for such items of information as whether or not they earn money outside of school; if so, how; what do they do with it; what they do in the summer time; what books are being read outside of school work; what form of recreation is being participated in; what are their vocational choices, and other similar information.

12. **Research.**—The vocational guidance adviser personally, or by means of committees, should always have under way some form of research work. He should keep in close contact with juvenile courts, make studies of particular cases, and do research

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[7] See *The Visiting Teacher in the United States*, Public Education Association, New York, June, 1921. Also, 2nd ed., July, 1923.

work in regard to juvenile occupations, street trades, summer employment, etc.

**13. Superintendent's Report.**—Another valuable source of information is the report of the superintendent of schools. Charts, diagrams, and tables should be developed from the figures in the preceding years' reports. This type of research is both valuable and tremendously interesting.

**14. Factory inspectors** will many times be able to furnish information of considerable value. They will always be found willing and anxious to cooperate with the vocational guidance adviser. The adviser should make a practice of spending a day or two several times a year visiting places of employment with the factory inspector.

**15. Wage Commissions.**—The reports of the State Minimum Wage Commissions, especially in regard to rulings, regulations, and decisions on special cases.

**16. Industrial Commissions.**—The hearings and reports of the State Industrial Commissions also furnish valuable information.

## III. SOURCES OF INFORMATION CONCERNING THE VOCATIONS

**1. Vocational Education Surveys.**—A most valuable source of information concerning the general phases of vocations, trades, occupations, and jobs are the vocational education surveys that have been and are being made, such as those of Minneapolis; St. Paul; Richmond; Indianapolis; New York City; Cleveland; Gary, Indiana; Denver; Evansville, Indiana; Philadelphia; New Orleans; Cincinnati; Wilmington; etc.

**2. Magazines.**—Some of these surveys are out of print, but others are being made and are noted and reported on in current educational magazines, such as the *Vocational Education Magazine*, published by J. B. Lippincott Company, Philadelphia; *Industrial Education*, published by the Manual Arts Press, Peoria, Illinois; *Industrial Arts Magazine*, published by the Bruce Publishing Company, Milwaukee, Wisconsin; *Industrial Management*, published by the Engineering Publishing Company, New York City.

**3. Books.**—Other sources of information concerning the job are to be found in books, such as *Occupations* by Gowin and Wheatley,[8] and other similar books, a list of which will be found in a *Guide to the Study of Occupations* by Frederick J. Allen,[9] and in Appendix C of this book.

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[8] GOWIN and WHEATLEY, *Occupations*, revised by BREWER, J. M., Ginn and Company, New York, 1923, 441 pp.

4. **Government Publications.**—The publications of the United States Department of Labor are valuable, particularly those of the *Bureau of Labor Statistics.* The Department has already issued a number of bulletins devoted entirely to descriptions of occupations, conditions of work, wages, and hours of work. *The Monthly Labor Review,* published monthly by the Department of Labor, is a valuable source of reference. Their *Occupational Index* should be in the office of every vocational guidance adviser.

5. **The Bureau of the United States Census** will furnish not only valuable information concerning the job, but also valuable statistics concerning workers. This can be found in Volume IV, *Occupation Statistics of the Fourteenth Census.* Other valuable data concerning wage earners will be found in the *Index to Occupations,* the *Statistical Abstract of the United States,* the *Abstract of Census of Manufacturers,* and other similar publications of the Bureau of the Census.

6. **Labor union officials** are valuable sources of information. Their business agents or secretaries will willingly give information upon the union regulations concerning the number of apprentices in certain trades and the openings for apprentices. The union publications, such as the *American Federationist* and the annual reports of the *Committee on Education of the American Federation of Labor,* frequently give information which it would take many hours of arduous labor to compile.

7. **Employment Agencies.**—The various kinds of employment agencies are valuable sources of information concerning the jobs. These agencies may be classified as: (1) Federal and State, who do general employment work with a rather low grade of labor. (2) Private employment agencies, which usually do a specialized business, the commonest type being the placing of women domestic workers. Another kind of specialized agency specializes in cooks and waitresses for restaurant and hotel work. Still another type places workers in business offices. In some cities there are so-called "Vocational Bureaus," which specialize in placing college women. These usually hold a membership in the National Committee on Bureaus of Occupations. (3) The

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[9] Allen, F. J., *A Guide to the Study of Occupations,* a selected critical bibliography of the common occupations, Harvard University Press, Cambridge, Mass., 1921.

employment agencies established by large concerns, such as the United States Steel Corporation, the Ford Motor Company, the Standard Oil Company, etc. (4) The business agents of various unions who act as employment officers. And, finally (5) the employment managers of various concerns, who are located at the plants in which they are employed.

8. **The State Industrial Directory,** if one is published, will furnish names, addresses, number of employees, etc., of all industrial firms within the state.

9. **The Children's Bureau.**—The publications of the United States Children's Bureau, Department of Labor, Washington, D. C., will furnish complete information concerning Child Labor Laws.

10. **The Woman's Bureau,** United States Department of Labor issues many valuable reports on the work of women and girls.

11. **The Federal Board.**—The bulletins of the Federal Board for Vocational Education, Washington, D. C., contain many analyses of jobs and occupations.

12. **The United States Public Health Service** publishes valuable data concerning occupational diseases and hazards.

### IV. INFORMATION CONCERNING EDUCATIONAL OPPORTUNITIES

Every guidance adviser shall have readily available up-to-date information concerning all sorts of opportunities for further education. These opportunities should be analyzed under the following heads: (1) requirements for entrance, such as age, sex, nationality, educational requirements, physical requirements, examinations of all kinds; (2) fees, registration, and tuition; (3) costs of books, tools, materials, etc.; (4) length of training period; (5) location of school or class, etc.

These educational opportunities may be classified under the following heads:

1. **Public school opportunities,** such as vocational schools and classes, part-time and continuation schools, cooperative courses, evening classes, opportunity classes, etc.

2. **Private philanthropic schools,** such as Y. M. C. A., Y. W. C. A., Y. M. H. A., K. of C., settlement houses, etc.

3. **Private-profit schools,** such as business colleges, auto-mechanics schools, art schools, music schools, etc.

4. **Technical schools** such as Carnegie Technical Institute, Armour Institute, or Pratt Institute.

5. **Professional schools** of Law, Medicine, Theology, Dentistry, Engineering, etc.

**6. Academic colleges,** *both public and private, such as Harvard, Yale, Princeton, the great western State Universities, the smaller colleges, and the sectarian colleges.*

**7. School Directors.**—Patterson's *Directory of Schools* and Sargent's *Handbook* will be helpful in this field; and the United States Bureau of Education's *Educational Directory and Statistics of Private High Schools and Academies* issued yearly can be obtained free of charge from the Commission of Education at Washington.[10]

**8. Catalogs.**—A file of catalogs of these various schools should be made available to students.

### V. LEGAL REQUIREMENTS

**1. Legislation.**—Every vocational guidance adviser should be thoroughly familiar with all legal requirement and legislation concerning child labor,[11] including Federal, State, and city legislation, laws, rulings, requirements, exceptions, and decisions, and also those concerning any particular industry, trade, or occupation.

**2. The school code** of the state and city, and the regulations of the State Board of Education and local Board of Education regarding working permits, employment certificates, vacation permits, and home permits furnish information with which the vocational guidance adviser must be thoroughly acquainted.

**3. The State and City Factory Inspection Departments** will furnish information concerning prohibited occupations, permissive occupations, forbidden machines, prohibited operations, legal hours of work, minimum wages, apprenticeship regulations, etc.

**4. The State Department of Labor** will furnish information concerning the minimum wage, hours, conditions of work, workmen's compensation, welfare regulations, accidents, prohibited occupations, and hours.

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[10] See *Educational Opportunities of Greater Boston,* Prospect Union Educational Exchange, Boston, Mass., 1924. *Directory of Trade, Industrial and Art Schools—Greater New York,* Henry Street Settlement, New York, 1909. *Directory of the Trades and Occupations Taught in the Day and Evening Schools of Greater New York,* Henry Street Settlement, New York, 1916. GOLDSMITH, E. B., *Opportunities for Vocational Training in New York City,* Vocational Service for Juniors, New York, 1922. HIRSCH, W. F., *Educational Work of the Young Men's Christian Association, Bull.,* No. 7, U. S. Bureau of Education, Washington, D. C., 1923. *Educational Work of the Y. W. C. A.,* Government Printing Office, Washington, D. C., 1923. HURT, H. W., *The College Blue Book,* The College Blue Book Company, Chicago, Ill., 1924.

[11] See *Child Labor Facts,* National Child Labor Committee, New York, 1924.

The organizer and administrator of guidance systems will find that comparatively little time given to developing sources of information will bring returns which will more than outweigh the effort required, most of the effort being to get on the mailing lists of the above agencies and to file properly the material when it is received.

## CASE PROBLEM[12]

### How Many Children in the United States Are at Work?

"In the United States in 1920 over one million (1,060,858) children from 10 to 15 years of age, inclusive, were reported by census enumerators as engaged in gainful occupations." This number was approximately one-twelfth of the total number (12,502,582) of children of the ages in the entire country. The number of child workers from 10 to 13 years of age, inclusive, was 378,063. The census does not report the number of working children under 10 years of age, but it is known that such children are employed in large numbers in agriculture, and in smaller numbers in many other occupations, such as street trading, domestic service, and industrial home work."

Table XXXIV.—Occupations of Children by Age Groups, 1920

| Occupation | Children from 10 to 15 years of age, inclusive | | Children from 10 to 13 years of age, inclusive | |
|---|---|---|---|---|
| | Number | Per cent distribution | Number | Per cent distribution |
| Total | 1,060,858 | 100.0 | 378,063 | 100.0 |
| Agriculture, forestry, and animal husbandry | 647,309 | 61.0 | 328,958 | 87.0 |
| Farm laborers (home farm) | 569,824 | 53.7 | ........ | (¹) |
| Farm laborers (working out) | 63,990 | 6.0 | ........ | (¹) |
| Extraction of minerals | 7,191 | 0.7 | 647 | 0.2 |
| Manufacturing and mechanical industries | 185,337 | 17.5 | 9,473 | 2.5 |
| Transportation | 18,912 | 1.8 | 1,899 | 0.5 |
| Trade | 63,368 | 6.0 | 17,213 | 4.6 |
| Public service (not elsewhere classified) | 1,130 | 0.1 | 153 | (²) |
| Professional service | 3,465 | 0.3 | 621 | 0.2 |
| Domestic and personal service | 54,006 | 5.1 | 12,172 | 3.2 |
| Clerical occupations | 80,140 | 7.6 | 6,927 | 1.8 |

[1] Figures not yet available. [2] Less than one-tenth of 1 per cent.

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[12] See *Bulletin*, "Child Labor in the United States," United States Department of Labor, pp. 4, 5, 7, 9.

TABLE XXXV.—PER CENT OF CHILDREN ENGAGED IN GAINFUL OCCUPATIONS, BY SEX, 1920[18]

| | Children from 10 to 15 years of age, inclusive | | |
|---|---|---|---|
| | Total | Engaged in gainful occupations | |
| | | Number | Per cent |
| Both sexes | 12,502,582 | 1,060,858 | 8.5 |
| Male | 6,294,985 | 714,248 | 11.3 |
| Female | 6,207,597 | 346,610 | 5.6 |

**States.**—In Mississippi more than one-fourth of all the children from 10 to 15 years of age were at work; in Alabama and in South Carolina, 24 per cent; in Georgia, 21 per cent; and in Arkansas, 19 per cent. Of the New England States, Rhode Island had the largest proportion of children from 10 to 15 years of age, 13 per cent, "employed in gainful occupations." Except in the South no other state has so large a percentage of employed children as this. When all occupations are taken into account, the proportion of children at work is much larger in the South than in any other section of the country; but when non-agricultural occupations alone are considered the proportion is considerably larger than New England and for the Middle Atlantic States, and slightly larger for the East North Central States—Ohio, Indiana, Illinois, Michigan, Wisconsin—than for any one of the three southern geographic divisions.

**Cities.**—Among cities with 100,000 or more inhabitants the following have 10 per cent or more of their child population 10 to 15 years of age, inclusive, at work: Fall River, 18 per cent; New Bedford, 17 per cent; Reading, 13 per cent; Atlanta, Providence, and Paterson, 12 per cent; Trenton, 11 per cent; New Orleans, Milwaukee, and St. Louis, 10 per cent.

### Questions

1. Is it a really bad thing to have children less than 14 years of age work? What is it that we object to?

2. Is it desirable that they should be taught to work; its meaning; its responsibilities; its dignity? When? Why? How?

3. Do we really teach them to work in our schools?

4. What is the difference between work, play, drudgery, labor?

5. The 1910 Census was taken April 15; the 1920 Census was taken January 1. Would that fact affect the figures at all? Which sets? In what way?

6. In which of the 11 groups reported do we find the worst child labor conditions?

7. In which group can vocational guidance be most effective and of most service?

8. In what states is the need for vocational guidance the greatest? Which states offer the best opportunities?

[18] From the *Fourteenth Census of the United States Population*, 1920, p. 5.

9. Why do the ten cities named have such a large percentage of child labor? Are the industrial managers to blame? The school managers? The home managers? The social managers? The consumers? The children?

10. List the remedies. Which is most important? Which should be applied first? What problems will arise as a result of the remedies? How long will it take to remedy the situation?

## CASE PROBLEM

### TABLE XXXVI.—REGISTRATIONS IN NEW YORK STATE EMPLOYMENT OFFICES

The *Industrial Bulletin*, Volume III, December, 1923, issued monthly by the Industrial Commissioner of New York State, Albany, on page 70 prints a table from which the following is adapted:

| Industry and locality | Number of workers registered for each 100 places open | |
|---|---|---|
| | Oct., 1923 | Oct., 1922 |
| Industries or occupations: | | |
| Agriculture | 102.4 | 82.8 |
| Building and construction | 100.7 | 120.7 |
| Casual workers | 98.2 | 79.3 |
| Common laborers (other than casual workers) | 98.2 | 74.3 |
| Clerical | 208.0 | 221.0 |
| Domestic and personal service | 91.8 | 82.3 |
| Hotels, restaurants, and institutions | 105.2 | 111.4 |
| Manufacturing | 113.5 | 106.4 |
| Professional and technical: | | |
| Transportation and public utilities | 126.8 | 79.9 |
| Trade, wholesale and retail | 98.9 | 93.0 |
| Miscellaneous | 115.7 | 132.4 |
| Cities: | | |
| Albany | 137.4 | 120.8 |
| Binghamton | 131.6 | |
| Buffalo | 104.7 | 71.6 |
| Dunkirk | 86.1 | 71.2 |
| Elmira | 108.1 | 106.2 |
| New York City | 101.6 | 92.6 |
| Rochester | 99.6 | 108.2 |
| Syracuse | 128.0 | 118.4 |

NOTE.—Less than 100 places open in professional and technical work.

## Questions

1. In what definite ways might the above monthly tabulation be of value to the vocational guidance adviser?
2. In what definite ways might it influence the vocational advice given to certain groups or individuals?
3. What particular types of people generally apply for work at state employment offices? What particular types do not apply?
4. Which types of people most need help at state employment offices?
5. Choose and discuss two outstanding items in the above table that are of interest and value to the vocational guidance adviser.

## CASE PROBLEM

### TABLE XXXVII.—INDUSTRIAL FATALITIES IN NEW YORK STATE (MARCH, 1924)

On page 159, *Industrial Bulletin*, Volume III, No. 7, issued April, 1924, by the Industrial Commissioner of New York State at Albany, New York, the following data are presented:

| Number of deaths, cause | Total, state |
|---|---|
| Vehicles | 26 |
| Steam and electric railways | 7 |
| Automobiles | 16 |
| Wagons | 2 |
| Other | 1 |
| Falls | 29 |
| From ladders and scaffolds | 7 |
| From other elevations | 2 |
| Down stairs | 5 |
| On level | 9 |
| From windows | 3 |
| Other | 3 |
| Hoisting apparatus | 9 |
| Elevators | 7 |
| Others | 2 |
| Handling objects | 19 |
| Strain in handling | 7 |
| Struck by objects handled | 12 |
| Explosions, electricity burns | 14 |
| Explosions | 1 |
| Burns | 8 |
| Electricity | 5 |
| Power-working machines | 5 |
| Poisonous substances | 5 |
| Prime movers | 1 |
| Power transmission apparatus | 1 |
| Falling objects | 11 |
| Stepping on or striking objects | 3 |
| Drowning | 2 |
| Miscellaneous | 21 |
| Indefinite | 20 |
| **Total** | **166** |

Table XXXVII.—(*Continued*)

| Number of deaths in each industry | Total, state |
|---|---|
| Stone, clay, and glass | 8 |
| Metals | 24 |
| Wood | 4 |
| Leather and rubber | 7 |
| Chemicals | 8 |
| Paper | 4 |
| Printing | 3 |
| Textiles | 4 |
| Clothing | 3 |
| Food | 9 |
| Construction | 22 |
| Transportation | 22 |
| Public utilities | 12 |
| Trade | 13 |
| Service | 17 |
| Mining | 1 |
| Agriculture | |
| Public employment | 3 |
| Not reported | 2 |
| All industries | 166 |

The number of industrial deaths as reported to the State Department of Labor for the month of March was 166, a high mark for the current calendar year and a marked increase over the figures reported for the preceding three months. For the months of December, January, and February 134, 133, and 121 fatalities respectively were shown.

Except for hoisting apparatus, each of the major groups of the classification as to cause of accident shows an increase over the figure of the preceding month.

The most striking increase in the fatality frequency was found in the class of handling objects. The 19 deaths reported here for the month of March is the greatest number shown since the compilation of monthly fatality figures, beginning in October, 1923. Most of these occurred in the New York City district and can be definitely ascribed to the increase in building operations in that district.

Falls from windows, all of them involving window cleaners employed in the New York City district, exacted a toll of three lives. The only other previous report made for this class was for the month of November, 1923.

Most of the elevator accidents were caused by persons being caught between the elevator and a landing.

The causes of industrial fatalities, classified by compensation districts reported for March, 1924, were as follows:

Of the five deaths due to poisonous substances or occupational disease, one life was claimed by each of the following industries: leather, painting, brass, dyes, and chemicals. One fatality resulted from sarcoma of the knee joint contracted by a clerical worker 18 years old, who habitually closed his desk with his knee.

There were two deaths by drowning. One was that of an aged watchman who fell off a dock. The other resulted from a fall into a reservoir.

An investigation of the ages of the employees who died during March as a result of industrial accidents shows that 50 of them were over 50 years of age. The members of this group, it was found, were engaged in substantially the same occupations as those of other ages and were distributed throughout the industries in the same proportions.

Two fatalities were reported for boys 15 years of age. Both were caused by falls down elevator shafts. In one case the deceased operated the elevator, while in the other the boy was a passenger.

The distribution of fatalities in the industry divisions shows increases throughout, except for a few minor groups.

The most striking increase was found in the metals group, where a new high mark was established.

Public utilities also established a record by reporting 12 fatalities where the previous maximum had been 5.

Although construction shows an increase of only one over the month of February, 18 of the 22 fatalities were reported by the New York district.

### Questions

1. Of what particular value is such information as this to the guidance adviser?
2. In which two divisions of a complete guidance system would these data and items be of most value?
3. In which particular schools and classes would they be of most value?
4. If you decided to use this information as it came to you every month, describe in detail the special methods and devices you might use in presenting this material.
5. What particular benefits in the way of results would you expect?
6. Which type of person is most apt to get injured?
7. Which type of worker is most apt to get injured?

## CASE PROBLEM

### Self-support in College

In the February 2 issue of the *Saturday Evening Post*, Mr. Howard Brubacker presented the following:

"In response to an inquiry the authorities of about 175 educational institutions have been able to furnish figures, or at least careful estimates, of the number of students who are supporting themselves, in whole or some substantial part, by remunerative work. These returns, though frankly incomplete, cover all kinds of colleges, large and small, public and private, academic and technical, men's, women's and coeducational; they are from almost every state in the Union and represent an enrolment of 225,000 students.

"The percentage of students reported as partially or wholly self-supporting in the various colleges runs the whole gamut from nothing to all, and the total thus indicated is almost exactly 100,000. If this proportion of 44 per cent holds true for all colleges and universities, and normal and professional schools, the total number of students who are working their passage, partially or wholly, would be well over 200,000.

"No, the self-supporting student isn't lonely any more. He isn't lonely at Yale, for he is one-third of the student body; or at Princeton, where he is one-quarter. He is half of the University of Chicago, 60 per cent of the

University of California and of the College of the City of New York. He is 68 per cent of the University of Washington and 85 per cent of Tufts. Sometimes loneliness, if there is any, must be on the other foot.

"These figures do not include vacation work. Every self-supporting student works in the summer, of course; but the inquiry relates only to working during term time.

"What are some of these jobs? How is it possible for 200,000 students to earn while they learn? In your cultured, old-school manner you ask, 'How do they get that way? Waiting on table I suppose.'

"Yes, that is still the commonest and most important of all roads—if not to affluence, at least to regular meals.

"Then there are the endless variations upon the commissary idea—managing eating clubs and boarding tables, working in public grill rooms and restaurants, cooking, dishwashing, peeling potatoes, running food stands, making the round of dormitories at night with baskets of edibles.

"We find students gainfully employed in such varigated forms of physical culture, as snow shoveling, coal heaving, baggage smashing, raking lawns, clipping hedges, barbering, bootblacking, setting up pins in bowling alleys, and repairing bicycles. One fellow was a chauffeur, another a lamplighter, a third a postal clerk. An Ohio fellow took care of a chronic invalid, living and studying at the sick man's house. A Harvard A. M. began his academic career in another college by working in a rock quarry three hours every morning. A New York University student bought a ladder and a pail and worked up a window-cleaning business until he had 60 steady customers at an average price of 30 cents a window. Another chap got a vacuum cleaner and personally conducted it all over town. A couple of Amherst boys at last accounts had lucrative employment digging graves, no doubt spouting appropriate passages from Hamlet as they worked. A good angel to Iowa housewives was the lad who came around in the fall prepared to take down screens and put up storm sashes. He got the same job—with reverse English in the spring. Two boys in Dubuque University worked on alternate nights in the baggage room of a railroad station, doing the heavy part of their sleeping on their nights off.

"Watchmen, janitors, lifesavers, paper carriers, farm, shop and railroad workers—an Ohio Wesleyan boy hobnobbed on Saturday with a truck farmer, getting $2.50 and a fine dinner free. A Harvard junior reported working at five jobs simultaneously, chiefly of a clerical nature, with a total net income of $1,350 for the college year.

"Colleges of agriculture furnish no end of work for their students in fields, orchards, and dairy barns. Sometimes these jobs are so close to the curriculum that it is almost like getting paid to study one's lessons. A freshman at Rutgers had to milk eight to ten test cows a day and do general barn keeping for his lodging and 25 cents an hour, and he paid his entire way through school with that and similar jobs."

### Questions

1. Of what value is this information to the guidance adviser?
2. In what particular case groups would it be of special value? For what special individuals?

3. Would you give it to all students in *all* classes? All students of certain classes? Limit its use to certain individuals? Why?
4. If you were advising in a college or high school, what would you do about this entire question of self-support? What attitude would you take? What regulations formulate? What machinery devise? What records keep? What relationship consider? Surveys make?

## CASE PROBLEM

### PRESS REPORTS OF BUSINESS ACTIVITIES

The following three items were clipped on the same day (June 10, 1924):

#### DECLINE IN BUILDING

"May building record for the 36 Eastern States showed a decline, according to *F. W. Dodge Corporation.* Total May building contracts in these 36 States (which include about seven-eighths of the total construction activity of the country) amounted to $419,272,000. Decrease from April, 1924, and from May, 1923, 13 per cent. Total construction started from January 1 to June 1, 1924, amounted to $1,934,240,000, an unprecedented figure, being an increase of 11 per cent over the same period in 1923. Contemplated new work reported in May, 1924, amounted to $574,639,000, which was 5 per cent less than the amount reported in April, 1924, and 10 per cent less than the amount reported in May, 1923."

#### INCREASE IN 5- AND 10-CENT STORE SALES

"There has been no slowing down in the progress of the important so-called 5- and 10-cent stores since the beginning of the year. Sales have continued to increase, last month having been the best May on record for all of the big companies, according to press reports.

"The combined sales in May of the four largest systems: F. W. Woolworth Company, S. S. Kresge Company, S. H. Kress & Company and McCrory Stores Corporation, totaled $29,211,484, an increase of $3,523,011, or 13½ per cent over the same month of 1923. Last year, in turn, reported an increase of $4,158,518, or 19 per cent. How rapid has been the growth of chain stores can be appreciated from a study of figures for previous years. With the exception of 1921, when all but Kresge reported slight decreases, May of each year has shown continued gains. Woolworth's business has more than doubled since 1918. Last month's sales of $17,074,698 compared with $14,791,432 in the same month of 1923, show an increase of $2,283,265 or 15.44 per cent. In May, 1918, sales were $8,324,830."

#### INCREASE IN STEEL SHIPMENTS

"The *Wall Street Journal* reports that the United States Steel Corporation is still shipping at a rate of over 35,000 tons a day and bookings so far in June have been about 2,000 tons a day larger than the average in May. There is an increase in inquiries from several sources."

## Questions

1. Of what value are such items to the director of vocational guidance? What should he or she do with them?

2. Of what value are such items to the guidance adviser? What should he or she do with them?

3. What publications make a practice of printing such items? (See *Lefax*, Philadelphia, *Industrial Digest*, New York, *Industrial News Survey*, New York.)

4. In which particular division of a complete guidance system would such items be of most value? In what way?

5. The volume of building construction, the volume of sales in the 5- and-10-cent stores, and the number of unfilled steel orders are three of about twenty so-called "business barometers" used by business men in planning their activities. Should the guidance personnel be acquainted with such material? Why? What use may be made of it? To which group would it be most valuable?

6. Would you use such material in classes? Which classes? How would you use it? What results would you expect?

7. Are the data given in the steel report sufficient? Would it help to know the same figures for May for the past three years? How would it help us in our work?

8. What about the building report--is it a serious matter or not? At which period of the year is building most flourishing? What do you get out of the comparative monthly and yearly figures as given? In what ways could the guidance people use this material in their work? How might it influence students if presented to them?

## CASE PROBLEM

### Comparison of Number of Persons Seeking Work and Workers Called for at New York State Employment Offices in February, 1924

In the *Industrial Bulletin*, issued by the Industrial Commissioner of New York State, Volume III, No. 7, April, 1924, page 168, the accompanying data is given.

### TABLE XXXVIII

| Industry and locality | Workers seeking employment (registrations and renewals), total | Workers called for by employers, total | Places reported filled, total | Number of workers registered for each 100 places open | | |
|---|---|---|---|---|---|---|
| | | | | Feb., 1924 | Jan., 1924 | Feb., 1923 |
| Agriculture | 366 | 315 | 181 | 116.2 | 143.1 | 113.1 |
| Building and construction | 938 | 343 | 263 | 273.4 | 244.6 | 149.6 |
| Casual workers | 3,723 | 4,106 | 4,035 | 90.7 | 110.2 | 84.1 |
| Common laborers (other than casual workers) | 2,680 | 1,883 | 1,660 | 142.3 | 129.4 | 85.6 |
| Clerical | 2,361 | 925 | 690 | 255.2 | 233.2 | 183.4 |
| Domestic and personal service | 941 | 816 | 396 | 115.3 | 134.7 | 78.9 |
| Hotels, restaurants, and institutions | 1,224 | 915 | 651 | 133.8 | 141.4 | 100.0 |
| Manufacturing | 2,485 | 2,012 | 1,356 | 123.5 | 138.8 | 79.9 |
| Professional and technical | 80 | 19 | 15 | | | |
| Transportation and public utilities | 472 | 258 | 220 | 182.9 | 258.8 | 151.9 |
| Trade (wholesale and retail) | 1,467 | 1,086 | 832 | 135.1 | 167.5 | 94.9 |
| Miscellaneous | 811 | 541 | 367 | 149.9 | 138.0 | 138.3 |
| Total | 17,548 | 13,219 | 10,666 | 132.7 | 145.4 | 99.1 |
| Cities: | | | | | | |
| Albany | 1,669 | 842 | 657 | 198.2 | 206.0 | 136.7 |
| Binghamton | 452 | 367 | 340 | 123.2 | 154.8 | |
| Buffalo | 2,359 | 1,653 | 1,279 | 142.7 | 154.7 | 85.2 |
| Dunkirk | 409 | 208 | 178 | 196.6 | 166.6 | 71.4 |
| Elmira | 408 | 341 | 334 | 119.6 | 125.2 | 113.3 |
| New York City | 7,801 | 6,776 | 5,618 | 115.1 | 121.3 | 93.7 |
| Rochester | 2,838 | 1,879 | 1,390 | 151.0 | 193.2 | 121.2 |
| Syracuse | 1,612 | 1,153 | 870 | 139.8 | 160.4 | 92.3 |
| Total | 17,548 | 13,219 | 10,666 | 132.7 | 145.4 | 99.1 |

## Questions

1. Of what particular value are the statistics which are issued every month to the vocational guidance adviser?

2. What type, level or grade of workers generally apply for positions at a State Employment Office? Answer the same question for employers.

3. What indication of over-crowding (at a certain level) in some vocations is given in this table?

4. In which cities is there over-crowding?

5. In which group of workers is a shortage indicated? In which cities?

6. What conclusions might be deduced from a comparison of February, 1924, with February, 1923?

7. What vocations have their dull season during February?

8. What vocations have their busy season during February?

9. In which two divisions of a complete guidance system might these data be used? In which schools and classes of most value?

10. What reactions and results would you expect from the use of such material?

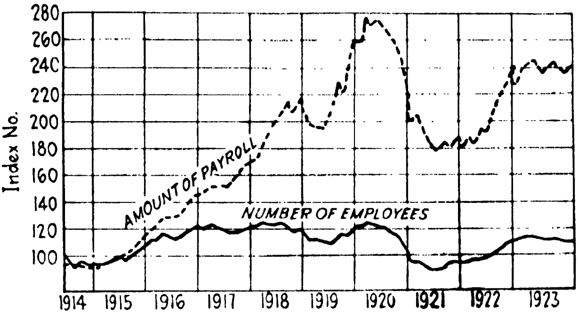
## CASE PROBLEM

### INDEX OF EMPLOYMENT IN FACTORIES IN NEW YORK STATE

(June, 1914 = 100)

On page 162, *Industrial Bulletin* Volume III, No. 7, issued April, 1924, by the Industrial Commission of New York State, the following is presented:

CHART 34



### Questions

1. Of what particular value is such a chart to the guidance adviser?

2. In which two divisions of a complete guidance system would it be of value? Which particular schools and classes?

3. What explanations do you have to offer for some of the "peaks and valleys?"

4. What explanation have you to offer for the correlation or lack of correlation between some of the "peaks and valleys?"

5. What is meant by "June, 1914 = 100?"

6. This chart is for factories. Would a similar chart for raw material or for stores be exactly similar? Which of the three would show "valleys" before the others?

7. What class of books would you ask the librarian for to get further information concerning these peaks and valleys? Under which specific topic would you find this information?

8. What results, reactions, decisions, etc. might be expected from the use of such data?

## CASE PROBLEM

### REVIEWS OF BUSINESS CONDITIONS

The following items were clipped from *Monthly Review of Credit and Business Conditions* issued free of charge by the Federal Reserve Bank of New York:

"*Business Conditions in the United States.*—Production in basic industries, after a considerable decline in recent months, was maintained in July at the same level as in June. Factory employment continued to decline. Wholesale prices increased for the first time since early in the year, reflecting chiefly the advance in the prices of farm products."

"*Production.*—The Federal Reserve Board's index of production in basic industries, which had declined 22 per cent between February and June, remained practically unchanged during July. Iron and steel and woolen industries showed further curtailment, while the production of flour, cement, coal, and copper was larger than in June. Factory employment decreased 4 per cent in July, owing to further reduction of forces in the textile, metal, and automobile industries. Building contract awards showed more than the usual seasonal decline in July, but were 10 per cent larger than a year ago."

"*Employment and Wages.*—Between the middle of June and the middle of July there were further decreases of about 4 per cent in the number of factory workers employed in New York State and in the United States, which brought the total to the lowest since early in 1922 and approximately 13 per cent below the number employed in March this year. Except for a slight further seasonal increase in the food products industries, all groups of manufacturing industries reported reductions in employees, and the reductions were especially large in the metal-working and textile industries. Since the end of July, however, current incomplete reports indicate little net change in employment, as extended vacation periods in some industries have been offset by increased operations in others.

"The percentage reduction shown for factory employment in New York State since March represents the release of over 175,000 workers from the factories and a decrease of approximately $25,000,000, or 17 per cent, in monthly wage payments. Notwithstanding these large decreases, the state employment offices report that, while there is some unemployed labor of various types, including even building labor, serious unemployment has so far been averted by the unusual volume of outdoor work. Road construction has been particularly heavy, owing to the fact that last year's program was restricted by labor shortage. Building continues larger than last year. Special efforts have been made by the state employment offices to place unemployed factory workers on the farms. In addition to the usual advertising, radio broadcasting was used to find places for workers."

### Questions

1. Of what value are such items, received monthly, to the guidance adviser?
2. In exactly what ways would such information modify your advice?
3. How would you use such information?
4. Present a suggested form of chart whereby you could keep a continuous record of these changes.

## CASE PROBLEM

### PHYSICAL GUIDANCE

Physical examinations in the Bronx Continuation School during 1923 are reported on by Dr. Jerome Meyers, Industrial Medical Inspector, Division of Industrial Hygiene, in Volume XIII, No. 9, September, 1923, page 201, of the *Monthly Bulletin* of the New York City Department of Health.

"In all, 588 boys were examined. Of these only 78, or 13 per cent, were found normal. The other 510, or 87 per cent, showed one to three or even five defects. These defects ranged in seriousness from lack of dental cleanliness to such conditions as epilepsy or organic heart disease. Three hundred and sixty-seven boys, or 63 per cent, showed dirty, often foul, teeth, which in some instances had not been cleaned since birth. When we consider the danger of neglected teeth becoming infected and spreading germs and toxins to the heart or to the joints, it is apparent how beneficial physical examinations are on this score alone. Twenty had pyorrhea in marked degree; 30 decayed teeth; 30 enlarged tonsils; 27 nasal obstruction; 6 evidence of old but healed tuberculosis of the lung; 10 malnutrition; 45 anemia; 6 organic heart disease; 7 deformities of the spine; 4 flat feet; 16 confessed to excessive smoking of cigarettes, some using more than 30 a day; 80, or 14 per cent, had defective eyesight in one or both eyes; numbers of others showed special defects."

"Not only were the examinations made, but each boy, as he was informed of his defects, was given a little individual talk about them, about their meaning for the present and for the future, and how he could best correct these defects through his own efforts and under the advice of his physician. Again, each time he was reexamined these points were emphasized and, if no effort had been instituted to correct the defects, the boy was questioned as to personal, home, or even industrial or monetary reasons for this lack of response. At times, defects, such as lack of care of the teeth, or pyorrhea were demonstrated to groups and local and remote dangers of such conditions explained. More serious defects or illnesses were reported to the principal or assistant principal and discussed from the standpoint of medical treatment and vocational fitness. No pupils were treated, but were referred to their physicians, or to hospitals or dispensaries when necessary.

"Such physical examinations made on a group of boys from the ages of 14 to 17 years, a group such as is found in our continuation schools, are of especial value and significance, for here we have individuals just entering industrial or commercial pursuits, many of which hold certain health dangers and hazards. It is,therefore, highly important that such boys be examined, firstly, for general body health, so that defects may be remedied before they lead to severe illness or disability; and, secondly, for capacity and fitness to enter and maintain themselves successfully in their chosen field of work."

## Questions

1. In general, are continuation school boys likely to be normal, or above or below normal physically? Why? What factors are active in this situation?

2. Which of the defects mentioned would directly interfere with the successful practice of all vocations? Some vocations? Which?

3. For which of these defects is the individual entirely responsible? Parents? Society? Inherited?

4. Why is reexamination particularly important?

5. Is it the function of the school authorities to examine physically the students who have been sent to them for education?

6. Is it the function of the school to offer remedial treatment?

7. What are the legal rights of school, parents, and students, in this matter?

8. Why should those in charge of guidance concern themselves with this matter?

9. Outline the position which guidance advisers should take on this entire matter. Justify this position from the standpoint of guidance.

## CHAPTER XVIII

# A METHOD OF ANALYZING HETEROGENEOUS GROUPS OF PUPILS INTO HOMOGENEOUS CASE GROUPS[1]

At the beginning of the school year it will be necessary that the guidance adviser for his own school, and the director of vocational guidance for the entire school system, make an analysis of the heterogeneous mass of students that are in or are entering the school or school system, for the purpose of checking the established, or to be determined, educational and vocational objectives of the various groups.

1. **The first group** that can be segregated is composed of those who are to enter high school. This established near-objective should be checked by evidence which shows that the students have the intelligence and the financial means which will enable them to continue after they have entered. This group should be further subdivided according to the specified courses they intend to enter, and the length of time they intend to stay.

2. **The Second group.**—Within the high school a group should be segregated consisting of those pupils who have established the definite objective of college entrance. They should be further analyzed and classified as regards the colleges, the courses, the entrance requirements to those colleges and courses, and the possible vocations to which they lead.

3. **A third group** is composed of those who have established definitely the near-objective of employment entrance. They should be further classified in regard to trade, occupation, or job; whether it requires long-, short-term, or no training, and also when, where, and how this training, if any, is to be given. A check should be made on the intelligence, aptitudes, social and economic status, and physical conditions of these students.

4. **A fourth group** that should be segregated is that which has established no objective other than that of staying at home.

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[1] See PAYNE, A. F., *Administration of Vocational Education*, McGraw-Hill Book Company, Inc., New York, 1924, pp. 234–235. See also pages 177–178, this volume.

This will be found to be made up almost exclusively of girls who lack either the ability or the inclination to continue and make progress in school work, or else their parents are so well-to-do that they do not have to go to work. A comparatively small number of boys will also be found in this group who are of such low mental or physical status that they are neither able to continue their school work nor to obtain satisfactory employment.

5. **A fifth group** is composed of the various types of mental defectives. Some of these are high-grade morons, some have specific mental defects, others are low-grade morons, and a few will be found to be suffering from specific psychoses or neuroses.

6. **A sixth group** is made of those who should be scheduled for the so-called "try-out" courses. These students are on the verge of leaving school, but are often easily persuaded to stay longer in school on the basis of "try-out" courses that may possibly develop into specific vocational-value courses.

7. **The seventh and last group,** which will be found to be comparatively small, will be composed of drifters. They are undecided; they do not know what they want to do; they are subject to no pressure or urge, either from within or from without and they are waiting for some stimulus to force them to make a decision.

All these groups should be checked in several ways. It is inadvisable, as a general proposition, to accept the statement of a student at its face value. All their choices and statements should be checked by the records on file. Any decisions the students make should be guaranteed by the parents' signatures, or should be made at an actual interview with the parents. The decision should be checked by the school record, health record, record of psychological tests, and, if necessary, by personal investigation.

It is of course understood that seldom will it be possible to actually physically segregate these case groups into one place. The important thing is to be able to differentiate between them and to segregate them in the card index file for reference and treatment.

## CASE PROBLEM

### CHART 35.—THE ANALYSIS OF A HETEROGENEOUS GROUP INTO HOMOGENEOUS CASE GROUPS FOR GUIDANCE

| | |
|---|---|
| | Doctors |
| | |
| | Masters |
| | 4 College |
| | 3 |
| *A*<br>500 | 2 |
| | 1 |
| | 4 Senior High School |
| *B*<br>500 | 3 |
| | 2 |
| | 1 Junior High School |
| *C*<br>500 | 8 grade |
| | 7 grade |
| | 6 grade |
| | 5 grade |
| | 4 grade |
| | 3 grade |
| | 2 grade |
| | 1 grade |
| | Kindergarten |

***Problem:*** **Given three groups of approximately 500 students each, as indicated *A*, *B*, *C*, to analyze and classify these groups into case groups for guidance, the classification to be complete within a period of two weeks.**

***Queries:***

**1. What factors will form the basis for your analysis and classification?**

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..........................................................
..........................................................
..........................................................

**2. What standards, indices, scales, tests, measures, etc. are now available to evaluate these factors?**

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..........................................................
..........................................................
..........................................................
..........................................................

**3. What other sources of information are available for gathering data to be used as a basis for classification?**

..........................................................
..........................................................
..........................................................
..........................................................
..........................................................

**4. Present a budget of costs for making this classification.**

..........................................................
..........................................................
..........................................................
..........................................................
..........................................................

**5. After these case groups have been segregated, what is the next step?**

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..........................................................
..........................................................
..........................................................
..........................................................

**6. How would your procedure differ for a large city and a small town or village?**

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..........................................................
..........................................................
..........................................................
..........................................................

## CASE PROBLEM

### OVER-AGE GROUP

On page 93 of the summary volume of the Cleveland School Survey, made by Leonard P. Ayres, Russell Sage Foundation, New York City, 1917, a *table is presented showing the per cent of children in each elementary school who are over-age for the grade and also making slow progress.*

*In the table, 96 schools are tabulated. In the table below only every fifth school is presented.*

TABLE XXXIX

| No. | School | Per cent | No. | School | Per cent |
|---|---|---|---|---|---|
| 1 | Kennard | 9.5 | 51 | Tod | 21.2 |
| 6 | Addison | 11.6 | 56 | Clark | 22.7 |
| 11 | Dike | 13.2 | 61 | Orchard | 23.8 |
| 16 | South Case | 14.7 | 66 | Alabama | 25.1 |
| 21 | North Doan | 15.8 | 71 | Stanard | 25.7 |
| 26 | Outhwaite | 17.0 | 76 | Brownell | 27.5 |
| 31 | Hodge | 17.9 | 81 | Case | 28.7 |
| 36 | Sowinski | 18.1 | 86 | Detroit | 31.1 |
| 41 | Hazeldell | 19.0 | 91 | Hicks | 34.5 |
| 46 | Halle | 20.1 | 96 | Longwood | 47.5 |

### Questions

1. Of what particular value is such information to the guidance counselor?
2. How might you obtain such information concerning the schools of your school system?
3. What would you do with it when you get it?
4. Which school should receive most of your immediate attention? The least?
5. Make a list of contributing causes to such difference in schools.
6. As a guidance director what might you do about such a situation? How long would it take you? What would it cost?
7. Is it your job to remedy such situations?
8. Would a *perfect* guidance system remedy such situations?
9. What guidance principles are involved in this situation? (See "Principles of Vocational Guidance," chap. IV, this volume.)
10. Does the question of vocational education enter here? Democratic education? Education for democracy? Equality of opportunity? Equity of opportunity? Education for citizenship? Determinism?

### CASE PROBLEM

On page 33 of the book, *Measuring the Work of the Public Schools*, by JUDD, C. H., of the committee in charge of the survey of the Cleveland, Ohio, Public School System, published by the Russell Sage Foundation, New York City, 1916, the following table is presented, giving facts concerning five of 95 grade schools:

TABLE XL.—PER CENT OF PUPILS NOT PROMOTED IN EACH OF FIVE SCHOOLS AT EACH OF FIVE PROMOTION PERIODS

| School | Jan., 1913 | June, 1913 | Jan., 1914 | June, 1914 | Jan., 1915 |
|---|---|---|---|---|---|
| Kentucky..... | .. | 0.1 | 0.3 | 4 | |
| Observation... | .. | 11 | 13 | 12 | 6 |
| Rockwell...... | 33 | 17 | 20 | 28 | 32 |
| Rice.......... | 40 | 28 | 37 | 26 | 34 |
| Longwood..... | 29 | 21 | 24 | 27 | 38 |

## Questions

1. Would one be right in assuming that the teachers and principals of these schools had the same standards for promotion? What has been done recently about this matter?

2. What one subject is generally used as a basis of promotion and non-promotion? In what subjects should *all* children be given the same course and held to the same standards? Why? Do teachers generally agree on this?

3. Is non-promotion the best method of treating backward children?

4. Are the backward children generally found located in certain sections of cities and towns? Is their backwardness a cause or an effect?

5. What would you probably find in regard to the I.Q. of the children of the Longwood and Kentucky schools? The I.Q. of their parents? The occupations of their fathers? The amount of rent paid? The educational destination of the children? Their health? Their physique? Their fitness for labor, skilled trades, professions?

6. As a director of vocational guidance, what suggestions would you make to the superintendent, that would affect the following: The teachers? The principals? The superintendent? The course of study? Certain subjects? Certain standards of attainment?

7. What data would you need to support these suggestions? How would you collect, compile, and present these data?

8. Would your suggestions tend toward democracy in education or the opposite? Have we a democratic school system now? Will guidance tend to make it more democratic or otherwise?

# CHAPTER XIX

## TESTS AND TESTING

In general, there are two great divisions of vocational guidance: (1) diagnostic guidance; (2) informative guidance.[1]

The question of tests and testing is entirely in the field of diagnostic guidance. It is an outgrowth of the scientific phases of education which have been developed largely as a result of the new psychology. In the past, vocational guidance has been almost entirely conjectural, sentimental, aspirational, and based on impressions and inadequate assumptions, but with the development of the scientific method in education it is now rapidly becoming scientific and systematic, making use of many of the methods, technique, standards, scales, tests, and measures that have been developed in the fields of educational administration, supervision, psychology, and sociology.

It must not be thought, however, that all the advocates of vocational guidance, even today, agree that the most important part of guidance is diagnostic. There are still many workers and a few leaders who cling to the old idea that the most important service we can render any individual is to inspire him to aspire. They apparently take little account of the inherent capacities and qualities of that individual, or of case groups of individuals.

Apparently, all their proposals are based upon the assumption that all that is necessary is to inspire these individuals to aspire to great heights—"to hitch their wagon to a star"—and then you are to develop great ambitions, to give them a so-called "bird's eye view of the world's opportunities," and then the individual will guide himself both educationally and vocationally—will develop a conscious purpose and a conscious plan for his whole life. These people apparently either ignore, or are ignorant of all the data that have been developed in regard to individual differences and capacities, and lay most of their emphasis upon the informative phase of guidance.

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[1] SNEDDEN, DAVIS, *Educational Sociology*, The Century Company, New York, 1922, p. 609.

The writer believes that the future development of vocational and educational—or preferably, life—guidance depends in great measure upon the development and the use of scientific methods, tests, scales, measures, and standards, and of systematic forms of organization and administration. It should, however, be recognized that the use of tests and testing is only one phase of a complete guidance system, as is indicated in Chapter IX, "The Six Main Elements of a Guidance System."

## TYPES OF TESTS USED IN GUIDANCE

### 1. Intelligence Tests[2]

It is now quite generally accepted that intelligence tests are of considerable value in the fields of educational administration, and particularly in the special fields of vocational, educational, and moral guidance. It is admitted by all workers with these tests that they have their limitations, but they are steadily becoming more accurate and more precise, and the resulting data more and more dependable. In fact, it may be said that no guidance system is worthy of the name that does not take into account the results of intelligence tests.

Intelligence tests may be generally classified under two heads: (1) individual tests, such as the Binet-Simon scale for the measurement of intelligence, and the Yerkes-point performance scale; (2) group intelligence tests, such as the Otis tests, Thorndike tests, National intelligence tests, and many others of a similar nature.[3]

In some respects the group intelligence tests are of much greater value in vocational guidance than the individual tests. By their use it is possible to test the intelligence of large groups of students at the same time, thereby very materially reducing the cost, increasing the availability of guidance service to more pupils, and requiring fewer persons in the guidance system. No decision of importance to any individual or case group should be made on the basis of the results of one group intelligence test. At least two should be given and the results correlated. No tests should be used that have not been thoroughly standardized and norms established for them. No tests should be used for which the technique of giving the tests, and scoring and interpreting the results, have not been well standardized. No tests should be used that are subjective instead of objective. No person should give intellegence tests, or interpret the results of such tests, unless they have been specially trained in the technique of testing.

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[2] See Pintner, *Intelligence Testing*, Henry Holt & Company, New York, 1923. Pressey, S. L. and L. C., *Introduction to the Use of Standard Tests*, The World Book Company, Yonkers, N. Y., 1922. Terman, L. M., *The Measurement of Intelligence*, Houghton Mifflin Company, New York, 1916. Hines, H. C., *Measuring Intelligence*, Houghton Mifflin Company, New York, 1923. Ballard, P. B., *Group Tests of Intelligence*, Hodder and Stoughton, London. Trabue, M. R. and Stockbridge, F. P., *Measure Your Mind*, Doubleday, Page & Company, New York.

[3] See Appendices for a list of intelligence tests and bibliographies of tests.

The group intelligence tests will, in general, differentiate students into three large classes: (1) those who are exceptionally bright; (2) those who range around the normal; (3) those who are decidedly subnormal. The numbers in these two classes can be found by making a distribution table of the results of the intelligence tests and comparing it with the norms or distribution already established for this test.

The vocational guidance counselor, then, will have the immediate problem of guiding the two smaller groups at both ends of the table of distribution, that is, those who are exceptionally bright and those who are below normal. Arrangements should be made so that the exceptionally bright group may make faster progress in their school work, and, all other things being equal, should be encouraged to continue their education as long as possible. Their vocational aims should be established in the higher levels of vocations or professions and a vocational decision correspondingly delayed.

It will be found in a majority of the cases that those individuals who have a higher level of intelligence will possess no outstanding aptitudes. In general, they will be found to be equally capable along all lines of activities, although, of course, in many cases they will have certain leanings toward certain types of work.

The group who are slightly below normal in intelligence present the greatest problem to the vocational guidance counselor. The results of the group tests should first be checked by other group tests, or preferably by individual intelligence tests. The results of all these tests, along with their school-achievement records, should be analyzed, in order to discover any particular abilities or disabilities which these students may possess. Along with these, a definite and earnest attempt should be made to discover and develop any particular aptitudes which these students may possess. In general, it will be found that the lower the individual is in level of intelligence the less likely it is that he will possess any outstanding aptitude or talent. It is of the utmost importance that all possible means be taken to develop any possible aptitudes or capacities that these below-normal individuals may possess.

During the war the results of the Army mental tests developed the relationship and the significance of intelligence levels to success in various occupations.[4]

The results of much research work in this field have given us fairly accurate information along two particular lines:

1. The degree or level of intelligence which is necessary to complete successfully any particular grade in school, and also the level of intelligence necessary to complete successfully the work of any particular course in high school or college.

2. The level of intelligence necessary for individuals to enter successfully, maintain themselves in, and make progress in, any vocation. It must always be kept in mind that the diagnostic values of the intelligence tests and the intelligence levels, as related to success in school work and success in the vocations, hold good only for the larger group of students. The normal curve of distribution must be continually kept in mind, and also that there are exceptions at both ends of the normal curve.

### *Uses of Intelligence Tests*

Intelligence tests, with the resultant individual intelligence levels, are useful in a wide variety of ways, as follows:

1. As a basis for the classification of students into A, B, and C sections for the purposes of instruction. This use is now vuite generally followed in modern school systems.

2. As a means of assignment to courses or sections, so that homogeneous groups of students may be presented to the teacher for instruction, and so that the student may not be submitted to unfair competition by finding himself competing with students of much higher levels of intelligence, or so that the student may

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[4] See Yoakum, C. S. and Yerkes, R. M., *Army Mental Tests*, Henry Holt & Company, New York, 1920, chap. v. See also p. 7, this volume.

not develop lazy habits of work by finding himself in a class or section of much lower level of intelligence than his own.

3. As a check on promotion, retardation, and elimination. If a student fails in promotion, and at the same time possesses a normal or higher level of intelligence—this is clearly a case for investigation. If a student of a low level of intelligence is promoted or is given high marks by the teacher, this again calls for investigation.
4. For diagnosing the individual needs of the pupils, recognizing individual differences, and making adjustments as between the individual and the present offerings of the school.
5. As a check on the classroom instruction, an aid in the improvement of classroom instruction, and a check on the marks of the various teachers and various students.
6. As a basis for the formulation of new educational offerings to meet the known needs and individual differences of the various pupils.
7. As a basis for a plan for certain pupils of high level of intelligence to do more and better work and to make more rapid progress.
8. As a basis upon which the guidance counselor may prognosticate the probable success or failure of any student in any course of study in any school unit or any vocation.
9. As a basis for estimating the probable and possible educational career of any individual.
10. As a basis for the selection of certain schools or certain courses as educational objectives.
11. As a check on abnormal-behavior cases.
12. As a basis for the selection of certain occupations, trades, or professions as vocational objectives.

### *Occupational-intelligence Levels*

One of the important vocational guidance uses to which the results of intelligence tests have been put is that of classifying occupations on the basis of the intelligence necessary for success in them.

So far, the attempts so to classify the occupations have been more or less experimental and tentative rather than authoritative. Therefore, the tables given on the following pages should be used as indicative rather than as final. The designations of the vocations given are too broad. We know that among mechanical draftsmen there is a wide range of intelligence among the men who are at least holding their positions and making a living at drafting. This is indicated by the spread of the scores. In Chart 36 this spread is given for the middle 50 per cent. If all these spreads were charted, we would find that the laborers with the highest intelligence of their group had as much intelligence as those engineers with the lowest intelligence of their group.

But when considering the over-lapping of these spreads we must take into account that both the laborer with high intelligence and the engineer with low intelligence for their groups were probably improperly placed, would possibly work up or down into other classifications, and possibly were wrongly occupationally designated. These difficulties, and others that might appear with closer scrutiny, do not wipe out the value of these experimental classifications for the purposes of the guidance advisers.

### *The Army Occupational-intelligence Levels*

The work of the committee on classification of personnel in giving intelligence tests to large numbers of men has been discussed in Chapter II. One of the results of this testing was the computation and comparison of intelligence scores and occupations. Chart 36 gives a brief summary of extensive tables found in the final report on the work of the committee.[5]

CHART 37.—FRYER'S OCCUPATIONAL-INTELLIGENCE LEVELS[6]

The Army Occupational-intelligence Levels were used extensively at the Central Y. M. C. A., Brooklyn, and a correction process based on the results of over 3,500 personnel examinations was made. The results of this correction are presented in Chart 37.

The score ratings are for "Army Alpha" and for "Business Alpha."[7] The means for the occupation is presented as the score average and the score range, indicating range of intelligence within which we might reasonably expect success so far as intelligence is concerned in the designated occupation.

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[5] "Psychological Examining in the United States Army," *Memoirs of the National Academy of Science*, vol. xv, Government Printing Office, Washington, D. C., 1921, pp. 819–837.

[6] FRYER, D., "Occupational-intelligence Standards," *School and Society*, vol. xvi, No. 401, Sept., 1922, p. 276.

[7] FRYER, H. D. and FRYER, L. P., *Business Alpha, The 20-Minute Intelligence Examination*, Carlisle Press, Brooklyn, N. Y., 1922.

CHART 36.—OCCUPATIONAL-INTELLIGENCE LEVELS AS SHOWN BY RESULTS OF ARMY PSYCHOLOGICAL TESTS OF 36,500 MEN

| Occupations | Median score | Spread of score of middle 50 per cent | |
|---|---|---|---|
| Laborers | 35 | 21-63 | Common labor |
| Cobblers | 39 | 23-67 | Semi-skilled labor |
| Teamsters | 41 | 23-68 | |
| Farm workers | 42 | 24-70 | |
| Barbers | 43 | 22-70 | |
| Horse shoers | 44 | 25-70 | Skilled labor |
| Railroad shop mechanics | 45 | 26-83 | |
| Bricklayers | 48 | 23-81 | |
| Cooks | 49 | 28-79 | |
| Bakers | 53 | 35-83 | |
| Painters | 53 | 31-79 | |
| Blacksmiths | 54 | 29-83 | |
| Bridge carpenters | 55 | 27-84 | |
| General carpenters | 57 | 33-85 | |
| Butchers | 58 | 33-85 | |
| Locomotive enginemen | 59 | 33-82 | |
| Machinists | 61 | 33-86 | |
| Railroad conductors | 62 | 40-84 | |
| Plumbers | 62 | 38-87 | |
| Tool makers | 63 | 41-88 | |
| Auto repairmen | 63 | 41-89 | |
| Chauffeurs | 63 | 38-90 | |
| Tool room experts | 64 | 43-88 | |
| Policemen detectives | 64 | 44-89 | |
| Auto assemblers | 65 | 44-97 | |
| Ship carpenters | 66 | 49-95 | |
| Telephone operators | 70 | 58-99 | Clerical and semi-professional |
| Concrete construction foremen | 75 | 48-116 | |
| Photographer | 77 | 52-104 | |
| General electrician | 82 | 58-110 | |
| Telegraphers | 84 | 59-107 | |
| Railroad clerks | 92 | 66-116 | |
| General clerks | 96 | 74-123 | |
| Mechanical engineers | 98 | 63-133 | |
| Bookkeepers | 99 | 78-126 | |
| Dental officers | 106 | 84-130 | |
| Mechanical draughtsmen | 112 | 79-134 | |
| Stenographers | 115 | 93-142 | |
| Accountants | 117 | 101-145 | |
| Civil engineers | 125 | 98-147 | Professional |
| Medical officers | 130 | 101-165 | |
| Army chaplains | 150 | 109-173 | |
| Engineer officers | 157 | 134-184 | |

SUMMARY

| | | |
|---|---|---|
| Laborers | 35 | 21-63 |
| Semi-skilled | 42 | 23-70 |
| Skilled | 61 | 26-95 |
| Clerical and semi-professional | 96 | 58-145 |
| Professional | 140 | 98-184 |

### CHART 37.—FRYER'S OCCUPATIONAL-INTELLIGENCE STANDARDS—INTELLIGENCE STANDARD INDEX

96 Occupational Designations

| Intelligence for achievement | | | Occupation |
|---|---|---|---|
| Intelligence group | Score, average | Score, range | |
| A | 161 | 110-183 | Engineer (civil and mechanical) |
| | 152 | 124-185 | Clergyman |
| | 137 | 103-155 | Accountant |
| B | 127 | 107-164 | Physician |
| | 122 | 97-148 | Teacher (public schools) |
| | 119 | 94-139 | Chemist |
| | 114 | 84-139 | Draftsman |
| | 111 | 99-163 | Y. M. C. A. secretary |
| | 110 | 80-128 | Dentist |
| | 109 | 81-137 | Executive (minor) |
| C+ | 103 | 73-124 | Stenographer and typist |
| | 101 | 77-127 | Bookkeeper |
| | 99 | 78-126 | Nurse |
| | 96 | 74-121 | Clerk (office) |
| | 91 | 69-115 | Clerk (railroad) |
| | 86 | 59-107 | Photographer |
| | 85 | 57-110 | Telegrapher and radio operator |
| | 83 | 64-106 | Conductor (railroad) |
| | 82 | 57-108 | Musician (band) |
| | 81 | 59-106 | Artist (sign letterer) |
| | 81 | 60-106 | Clerk (postal) |
| | 81 | 57-109 | Electrician |
| | 80 | 62-114 | Foreman (construction) |
| | 80 | 56-105 | Clerk (stock) |
| | 78 | 54-102 | Clerk (receiving and shipping) |
| | 78 | 61-106 | Druggist |
| | 77 | 59-107 | Foreman (factory) |
| | 75 | 56-105 | Graphotype operator |
| | 74 | 53- 91 | Engineman (locomotive) |
| | 72 | 54- 99 | Farrier |
| | 70 | 46- 95 | Telephone operator |

Chart 37.—(*Continued*)

| Intelligence for achievement | | | Occupation |
|---|---|---|---|
| Intelligence group | Score, average | Score, range | |
| C | 70 | 44-94 | Stock checker |
| | 69 | 49-93 | Carpenter (ship) |
| | 69 | 48-94 | Handyman (general mechanic) |
| | 69 | 46-90 | Policeman and detective |
| | 68 | 51-97 | Auto assembler |
| | 68 | 47-89 | Engineman (marine) |
| | 68 | 42-86 | Riveter (hand) |
| | 67 | 50-92 | Toolmaker |
| | 66 | 45-92 | Auto engine mechanic |
| | 66 | 45-91 | Laundryman |
| | 66 | 49-86 | Gunsmith |
| | 66 | 44-88 | Plumber |
| | 66 | 44-48 | Pipefitter |
| | 65 | 44-91 | Lathe hand (production) |
| | 65 | 43-91 | Auto mechanic (general) |
| | 65 | 43-91 | Auto chauffeur |
| | 65 | 42-89 | Tailor |
| | 65 | 44-88 | Carpenter (bridge) |
| | 64 | 43-88 | Lineman |
| | 63 | 40-89 | Machinist (general) |
| | 63 | 46-88 | Motor cyclist |
| | 63 | 41-86 | Brakeman (railroad) |
| | 62 | 31-94 | Actor (vaudeville) |
| | 61 | 40-85 | Butcher |
| | 61 | 44-84 | Fireman (locomotive) |
| | 61 | 39-82 | Blacksmith (general) |
| | 60 | 38-94 | Shop mechanic (railroad) |
| | 60 | 36-93 | Printer |
| | 60 | 40-84 | Carpenter (general) |
| | 59 | 40-87 | Baker |
| | 59 | 39-83 | Mine drill runner |
| | 59 | 38-81 | Painter |
| | 58 | 37-85 | Concrete worker |
| | 58 | 40-83 | Farmer |

CHART 37.—(*Continued*)

| Intelligence for achievement | | | Occupation |
|---|---|---|---|
| Intelligence group | Score, average | Score, range | |
| | 58 | 37 - 83 | Auto truck chauffeur |
| | 58 | 37 - 82 | Bricklayer |
| | 57 | 41 - 81 | Caterer |
| | 57 | 39 - 71 | Horse trainer |
| | 56 | 38 - 76 | Cobbler |
| | 55 | 35 - 81 | Engineman (stationary) |
| | 55 | 34 - 78 | Barber |
| | 55 | 35 - 77 | Horse hostler |
| | 52 | 38 - 96 | Sales clerk |
| | 52 | 33 - 74 | Horse shoer |
| | 51 | 31 - 79 | Storekeeper (factory) |
| | 51 | 26 - 77 | Aeroplane worker |
| | 51 | 31 - 74 | Boilermaker |
| | 50 | 33 - 75 | Rigger |
| | 50 | 30 - 72 | Teamster |
| | 49 | 40 - 71 | Miner (general) |
| | 48 | 21 - 89 | Station agent (general) |
| C− | 40 | 19 - 67 | Hospital attendant |
| | 40 | 19 - 60 | Mason |
| | 35 | 18 - 62 | Lumberman |
| | 35 | 19 - 57 | Shoemaker |
| | 32 | 16 - 59 | Sailor |
| | 31 | 20 - 62 | Structural-steel worker |
| | 31 | 19 - 60 | Canvas worker |
| | 30 | 16 - 41 | Leather worker |
| | 27 | 19 - 63 | Fireman (stationary) |
| | 27 | 17 - 57 | Cook |
| | 26 | 18 - 60 | Textile worker |
| | 22 | 16 - 46 | Sheet-metal worker |
| | 21 | 13 - 47 | Laborer (construction) |
| D | 20 | 15 - 51 | Fisherman |

## The United States Veterans' Bureau Chart

Many service men in the World War received disabilities which handicapped them in the pursuit of the occupations which they followed at enlistment. The Government, through

CHART 38.—UNITED STATES VETERANS' BUREAU

Characteristics of Occupational Levels Compiled to Aid in the Advisement of Disabled Veterans

| Occupational level | Groups of occupations | Degree of intelligence and scope of ability required by the occupations | Degree and nature of responsibility required by the occupations | Degree and nature of the initiative and judgment required by the occupations | Examples of occupations | Education and experience required of the occupations |
|---|---|---|---|---|---|---|
| 5 | Executives<br>Professional men<br>Technical specialists | *Superior intelligence*—Very large scope of ability, or very high degree of technical skill. | General management; organization of large enterprises and departments; execution of policies, expert analyses of materials, methods, machinery, management, markets, money, and men; independent responsibility for problems and cases requiring original treatment. | Formulates principles and policies for complex enterprises and activities; plans, analyzes, organizes, adjusts, coordinates, and selects on a large scale or for several departments; initiates major actions; acts largely on own initiative. | High executive officer (president, general managers, superintendent of large divisions, etc.); lawyer; physician; engineer; county agent (agriculture); farm owner and manager requiring professional training; senior accountant. | Education: University graduate or equivalent.<br>Experience: Several years for executive position, less for professional. |
| 4 | Minor executives<br>Subprofessional men<br>High-grade technical workers | *Above average intelligence*—Large scope of ability, or high degree of technical skill. | Management and organization of departments and small enterprises, in professional life, responsibility for problems and cases that can be handled in accordance with prescribed policies. | Plans execution of principles of above and formulates independently principles for a restricted line of activity, such as a department, or a particular kind of case; initiates minor actions. | Minor executive and superintendent, department head (production, sales, etc.), machine designer, technical assistant to chemist, extension specialist (agriculture), junior accountant, secretary, salesman of high-grade technical lines. | Education: College or technical education of less than four-year requirement, or equivalent.<br>Experience: Usually two or more years. |

| | | | | | | |
|---|---|---|---|---|---|---|
| 3 | Tradesmen<br>High-grade clerks<br>Bookkeepers, etc. | *Average intelligence*—Average scope of ability, or average degree of technical skill. | Supervises immediate helpers; performs complete process (often requiring several machines); makes complicated machine adjustments; keeps ordinary records. | Lays out own work according to specifications; makes decisions as to quantity and quality of materials pertaining to complete process; applies learned methods without repetition of directions. May initiate variations. | Tradesmen (machinist, electrician, auto-electrician, etc.), draftsman (mechanical, architectural, etc.), salaried farm manager, stenographer, bookkeeper, salesman of high-grade goods. | Education: High school, or equivalent in trade training or apprenticeship.<br>Experience: Apprenticeship of three to four years, including training in a trade or business college. |
| 2 | Assistants to the tradesmen<br>High-grade clerks<br>Bookkeepers, etc. in level 3 | *Below average intelligence*—Limited degree of ability, or low degree of technical skill. | Performs tasks definitely laid out by skilled superior; operates one machine in more or less routine fashion; deals only with single process repeated in more or less identical fashion. | Plans very little, as needed for single operations; makes limited amount of decisions as to materials and methods; some decision in making minor adjustments; requires repetition of directions, especially when variations are made. | Helper (machinist, electrician, carpenter, plumber), machine operator, tire repairman, permanent farm help, stock clerk, salesman of low-grade goods. | Education: Sixth grade—fundamental mathematical processes, mechanics of English, limited knowledge of materials and construction of machine, etc.<br>Experience: Sufficient to learn the operation of a machine, usually not more than six to twelve months. |
| 1 | Routine workers<br>Laborers | *Low intelligence*—Very limited scope of ability or very little technical skill. | Performs manual tasks, operates automatic machines. | Decisions only as to order of performing familiar tasks; works by rule of thumb only; does no planning. | Machine hand, automatic machine operator, truckman, wrapper, messenger, janitor, factory operator, seasonal farm help, painter. | Education: Sufficient to understand directions, read labels, write single letters, and do numbers.<br>Experience: Sufficient to become familiar with the work, one to six months. |

*the United States Veterans' Bureau, trains these men for new occupations and enters them upon employments. To aid in the* selection of the employment objective for each within the possibility of his attainment, Chart 38, "Characteristics of Occupation Levels," was prepared by L. W. Bartlett of the Veterans' Bureau, and is used extensively throughout the regional offices.

When making use of intelligence levels and the results of intelligence tests of any kind, it must be kept clearly in mind that these by themselves are not sufficient in making a diagnosis for the purpose of establishing either educational or vocational objectives, the making of a vocational choice, or the giving of any kind of counsel. This is only one of many elements that should enter into the final decision.

## 2. ACHIEVEMENT TESTS

The development of the scientific phase of education has brought about the development of a wide variety of achievement tests. These tests have quite largely taken the place of old forms of midyear and end-of-term examinations, or at least serve as a check on them. They measure in a more scientific and accurate manner the progress of the class as compared with the courses of study, or with other similar classes and of individuals within the classes in the acquirement of definitely specified subject matter.

We now have standard achievement tests in nearly all of the definite fields of education, such as arithmetic, spelling, handwriting, reading, composition, history, language and grammar, geography, foreign languages, etc. It is to be much regretted that we have comparatively few achievement tests in the fields of vocational education. A survey of standardized achievement tests gives the following:

TABLE XLI

| Academic | | Vocational | |
|---|---|---|---|
| English | 37 | Commercial | 4 |
| Foreign language | 16 | Drawing | 5 |
| Writing | 12 | Home Economics | 7 |
| History | 14 | Industrial | 4 |
| Music | 4 | | |
| Physical | 5 | Total vocational | 20 |
| Reading | 17 | | |
| Science | 19 | | |
| Total academic | 149 | | |

### 3. Prognosis Tests

The prognosis test is a comparatively recent development. It is particularly valuable in the field of vocational and educational guidance. In fact, it is one of the most scientific forms of guidance that has yet been developed. A prognosis test assumes to develop the probable chances of success or failure of an individual in a certain subject or in a certain course, the idea being to pick out from the large group of students those who will probably be able to pursue that particular course successfully and eliminate those who have very little possibility of success in that course.

With the steadily increasing compulsory school age, the question has arisen as to just how far the state has the right to compel children to go to school under our school system as at present organized. We have sufficient evidence at hand to justify us in believing that the majority of 14- to 16-year-old students possess neither the quantity nor the quality of intelligence that will enable them to pursue the ordinary traditional school course with profit. They are being forced by law to stay in school, with the result that they become habituated to failure, are a burden upon the school system and upon the teacher, and develop bad habits of work and attitudes toward learning.

Again, we have considerable evidence to show that certain courses in our public schools cannot now be successfully pursued by children who have levels of intelligence below a certain point, or who lack certain specific mental abilities. These prognosis tests are in the form of prevention rather than cure. While it is true that all kinds of tests, such as intelligence tests, achievement tests, aptitude tests, vocational tests, may be used in a limited degree for the purpose of prognosis, these newer prognosis tests have been developed for prognosis in more specific fields.

Most of the so-called intelligence tests consist of a battery of tests that assume to test certain specific abilities, capacities, or characteristics. Some of these are tests of attention, perception, description and report, association, learning, memory, suggestibility, imagination, invention, range of vocabulary, and information.[8] In fact, it is generally accepted that "general

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[8] See Whipple, G. M., *Manual of Mental and Physical Tests*, Warwick and York, Baltimore, Md., 1914.

*intelligence" is merely a composite of specific intelligences, often interpreted as aptitudes, talents, abilities, capacities, "likings," "leanings," inclinations.*

## ABILITIES AND APTITUDES

When considering what psychology has to offer in the field of guidance, we must keep clearly in mind three phases of mentality that are of importance in guidance. These are:

1. **I.Q.'s** as a measure of general intelligence. This is of decided value and significance if it is related to the intelligence necessary to succeed in certain specified occupations, vocations or jobs, and courses of study or subjects of the school curriculum.
2. **Special abilities,** talents, aptitudes, capacities, or special intelligences, or any other designation, which may be given to the possession of some special capacity to acquire or ability to perform.
3. **The field of psychiatry** in the classification and diagnosis of abnormal mental states or disorders of the mind, such as neuroses, psychoses, *dementia praecox,* dissociation, perversions, and introversions, etc.

Study and work in the field of general intelligence and in the field of psychiatry are comparatively easy. Tools have been developed, definitions have been formulated, technique has been developed, data have been accumulated.

The work, of the *psychiatrist* must not be confused with that of the *neurologist,* who deals with the physical diseases of and injuries to the anatomical nerve structures, or with the *alienist,* who is chiefly interested in the medico-legal aspects of abnormal mentalities, or with the *psychologist,* whose work in this field consists in finding out how human beings adjust themselves to new situations.

The intelligence level or I.Q. by itself is not sufficient. We must have also the intelligence level necessary for success on the job. This has already been discussed on pages 307 ff. We must also consider the special intelligences, the specific capacities, or the special abilities of each student, if we are to make a thorough job of vocational guidance.[9] It may be possible that some student with a rather low level of general intelligence may have some special intelligence, ability, or aptitude which, in a given line of work, might possibly overcome the handicap of his low general intelligence.

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[9] See HOLLINGWORTH, L. S., *Special Talents and Defects,* The Macmillan Company, New York, 1923. BRONNER, A. F., *The Psychology of Special Abilities and Disabilities,* The Bobbs-Merrill Company, Indianapolis, Ind.,

For individuals with normal intelligence, their success would be greater in lines of endeavor for which they have special aptitudes, talents, intelligences, or ability. Their services to society would be greater, they would be more efficient, they would produce better quantitative and qualitative results with a less expenditure of effort, and they would—all other conditions being equal—be much happier.

The literature of psychology and of education is besprinkled with the word "aptitude." There seems to be no commonly accepted definition of aptitude, nor are we able to find any generally accepted lists of aptitudes based upon any generally accepted definition.

*Thorndike* gives the following definition: "An aptitude is an inborn capacity, an original tendency to respond to the circumstances of education by achievements in learning."[10]

*At the Institute of Educational Research*, Teachers College, Columbia University, students who score high in the academic intelligence test are said to have an *academic aptitude*. Those who score high in the clerical test are said to have a *clerical aptitude*. Those whom score high in the Stenquist mechanical tests are said to possess a *mechanical aptitude*. Those who score high in the Seashore musical tests are said to possess *musical aptitude*.

*Monroe*, in his *Cyclopedia of Education*, gives the following definition:

"An aptitude is that part of a person's mental equipment which gives him a special fitness for any kind of endeavor. Such an aptitude may be the result of either innate endowment, or special training, or both."[11]

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1917. STEACY, F. W., *The Interrelations of Mental Abilities*, Teachers College, Columbia University, New York, 1919. Burt, C., *The Distributions and Relations of Educational Ability*, P. S. King & Son, London, England, 1922.

[10] THORNDIKE, E. L., *Educational Psychology*, vol. i, Teachers College, Columbia University, New York, 1920.

[11] MONROE, P., *A Cyclopedia of Education*, vol. i, p. 161. The Macmillan Co., 1911.

*Poffenberger* says:

"*To choose out of all available candidates those of the highest intelligence does not guarantee the selection of those having the character traits needed for successful secretarial work.*"[12]

*Thurstone* says:

"*Ability in telegraphy is probably a special ability.* The general intelligence tests are not as valuable for diagnosing ability to learn telegraphy as for measuring general intelligence."[13]

At present all the work done in regard to the testing of aptitudes seems to have been along the line of testing aptitudes or fitness for certain specific jobs, such as journalism, clerical work, stenography, mechanical work, salesmanship, aviation, the work of the street car motorman, and other similar specified and defined occupations. Little real progress seems to have been made in this field of psychological research. It is quite probable that the method of approach has been entirely wrong.

*Dean Schneider*, of the University of Cincinnati, develops his point of view as follows:

> Every individual has certain broad characteristics, and every type of work requires certain broad types of characteristics. The problem, then, is to state the broad characteristics to devise a rational method to discover these characteristics or talents in individuals, to classify the types of jobs by the talents they require, and to guide the youth with certain talent into the type of job which requires those talents.[14]

Dean Schneider presents a list of 16 of these broad major characteristics, which may be applied either to the individual or to the type of work, that is, as to whether the individual has them or whether the job requires them. These are as follows: (1) physical strength, (2) mental ability, (3) mental accuracy, (4) rapid mental coordination, (5) concentration or mental focus, (6) directive ability, (7) settled disposition, (8) capacity for indoor or outdoor work, (9) originality or creative ability, (10) capacity for small-scope operations, (11) adaptability, (12) deliberation, (13) music sense, (14) color sense, (15) manual accuracy, (16) dynamic or static.

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[12] POFFENBERGER, A. T., "The Selection of a Successful Secretary," *Journal of Applied Psychology*, 1922, pp. 156–160.

[13] THURSTONE, L. L., "Mental Tests for Prospective Telegraphy, A Study of the Diagnostic Value of Mental Tests for Predicting Ability to Learn Telegraphy," *Journal of Applied Psychology*, 1919, pp. 110–117.

[14] Quotation from HOLLINGSWORTH, *Vocational Psychology*, p. 104.

*Poffenberger* gives the following:

> It is not by any means true that the best worker in any occupation is a person of a high intelligence. It is quite possible that for certain occupations a rather low grade of intelligence is adequate, and that to employ one of a higher grade of intelligence would be a waste. The determination of the minimum intelligence required to do satisfactorily certain kinds of work is an important problem, and the matter is being carefully studied. Furthermore, intelligence is not the only trait required for success in an occupation.[15]

*Gates* gives us the following: "Children of the same age will on the basis of endowment possess different aptitudes,[16] but he does not list or discuss them.

*Thorndike* gives us a list of five kinds of intelligences as follows: (1) verbal, (2) mechanical, (3) social, (4) ethical, and (5) artistic.

*Cyril Burt*, the English psychologist, gives us the following:

> Achievement in subjects of the school curriculum appear to be determined by mental factors of two kinds: (1) general educational abilities, dependent upon general intelligence; (2) specific educational abilities, such as (*a*) arithmetical abilities, (*b*) manual ability, (*c*) linguistic ability, and (*d*) literary ability.[17]

On pages 57 and 58, Burt gives us the following:

> The subjects which are positively correlated fall into three or four fairly distinctive groups:
>
> 1. *Arithmetical group.*
> 2. *Manual group*—hand work, drawing, writing quality.
>
> These are negatively correlated with arithmetical ability.
>
> 3. *Linguistic group*—dictation, reading, comprehension, and speed.
>
> These are negatively correlated with arithmetic and manual groups.
>
> 4. *Literary group*—history, geography, science, composition.

*Strayer and Norsworthy* classify children into four types on the basis of abilities or aptitudes:[18]

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[15] Poffenberger, A. T., *American Scientific Monthly*, March, 1921, p. 208.

[16] Gates, *Psychology for Students of Education*, The MacMillan Company, New York, 1922, p. 117.

[17] Burt, Cyril, *The Distribution and Relations of Educational Ability*, P. S. King & Son, London, England, 1922, p. 93.

[18] Strayer and Norsworthy, *How to Teach*, p. 163. See also, *Fifteenth Yearbook*, National Society, Study of Education, Part I, pp. 149–154. See also, O'Shea, *Social Development and Education*, pp. 209–225. See also, Bagley, *School Discipline*, pp. 216–227.

1. Dealing with *abstract* ideas.
2. Ability to deal with *concrete* situations.
3. *Executive* ability—action and control.
4. The *appreciative* type, dominance of feeling.

An *Institute of Vocational Orientation* has been established at Barcelona, Spain, supported by the Commonwealth of Catalonia.

The Institute is divided into four sections—information, medical research, psychological research, statistical research.

> The aptitudes which form the basis of classification of vocations are reducible to three types: (1) intelligence; (2) temperament; (3) character. Under each of these types there are three subgroups: (*a*) motor, (*b*) perceptual motor, (*c*) perceptual.
>
> Already about 30 occupations have been analyzed and some 142 tests of aptitude are available.
>
> These studies are reported in *Annals de L'Institut d'Orientacio Professional.*[19]

Here we have a use of the term aptitude in a sense which is quite different—in fact, so different that it is confusing.

Assume that all individuals have *some* capacity, ability, talent, aptitude, along any or every line. If society needs comparatively few people with capacities to serve along some particular line of endeavor—as is the actual situation—then society will select by rewards, such as money, honor, respect, etc., only those individuals who have the capacity to serve in a measure beyond the general mass of people, all of whom are assumed to possess this same capacity in some degree.

For instance, all physically normal people can run, box, walk, do acrobatic stunts to *some* extent. Society rewards only those who can perform these specific services very much better than their fellows.

Our problem, then, is not that of determining whether or not individuals possess certain capacities, talents, or aptitudes. We can assume that nearly all do possess all aptitudes *in some degree*, but the problem is to discover in what measure certain individuals possess certain aptitudes, and in what proportion as compared with their fellows, and in the proportion in which society is willing to reward sufficiently to make its development worth while.

[19] See POFFENBERGER, A. T., *School and Society*, vol. 14, pp. 15–16, 1921.

When considering this important topic of special capacities, talents, or aptitudes, we must not fall into the serious error of assuming that the possession of the particular aptitude under discussion is all-important. It is *only one of many other items* which must be surveyed, and it must be evaluated only in conjunction with these other items.

### IDIOT-SAVANTS

Good illustrations of the uselessness of possessing certain special aptitudes without possessing other qualities are found in the classic illustrations of the so called "idiot-savants." These individuals are considerable in number, but form a very small proportion of the population.

Idiot-savants are persons of a low level of general intelligence, but who possess a special aptitude, "gift," or talent for certain activities, which, up to the present time, has not been explained. It is presumed that the development of this special capacity is caused by the over-development of certain neurones of the cerebrum, although this is not definitely known. The point of importance for us is that here we have an apparently clean-cut illustration of the isolation of an aptitude that has developed out of proportion to the rest of the abilities and is comparatively useless both to the individual and to society.

Down reports a feebleminded boy at Normansfield whose *sense of touch* was so delicate that he could take a page of the *London Graphic* and split it into two perfect sheets. The brother of the boy referred to was for more than 60 years a resident of Earlswood Asylum and was known as the "genius of Earlswood Asylum." He was particularly "apt" at drawing, carving, and mechanical invention, and is assumed to have developed a "mechanical aptitude" far beyond the level of his general intelligence.

The case of a savant imbecile is reported by Fairholme in the *Animal World*, January, 1909, who was so expert at the *drawing of animals* and particularly cats that he became known as "The Cats' Raphael."

Barr in the *Journal of Nervous and Mental Disease*, for January 1898, describes an epileptic idiot who had developed *an audile aptitude* to such an extent that he would repeat fluently and with proper pronunciation long passages read to him from any foreign language, ancient or modern.

Several idiot-savants have been reported who had developed *extraordinary memories.* One could remember the date on which every person in the village had been buried, with their ages, causes of death, names and numbers of mourners, etc. Another could tell correctly and instantly the day of the week upon which any date fell; others have a prodigious capacity for memorizing poetry without any idea of its meaning. Many cases of musical memory and capacity are also recorded.

We are all acquainted with the "geniuses" of the asylum, street corners, and vaudeville stage who have *extraordinary capacity for mathematics* and are much below the general level in all other abilities.

The important point in these rare cases is that these special aptitudes may be and are isolated. These people are not geniuses or savants and their special aptitudes in most cases are noticeable only by virtue of contrast with their inaptitudes in all other lines. Many normal people have just as much capacity along the same lines as have these people, and undoubtedly thousands of people could easily develop as much capacity along not only that line but several others if the same opportunity for constant practice, freedom from economic stress, etc. were afforded them.

## MATHEMATICAL ABILITIES

There is no question but that great mathematical ability is inherited. This particular ability seems to belong to the same class, as regards inheritance, as does musical ability, literary talent, and artistic talent, and the same rules apply.

## SPECIAL ABILITY TO REMEMBER

All normal people are able to remember, but some possess this ability much more than others. In many cases a good memory passes for a high level of intelligence. Our school system in the past, and also at the present time, is quite generally so organized as to make the ability to remember very important.

There is no question but that the possession of an exceptionally good memory is an innate quality and is inherited. This explains the isolated cases of very remarkable memories and also explains why so many people with poor memories who subscribe to the so-called "memory training courses," so freely advertised, derive so little benefit from the courses.

Phenomenal memories are quite often associated with mental defect and mental disease. We have many illustrations of this in the so-called idiot-savants, with whom a stupendous memory passes for wisdom or intelligence.

The same laws of inheritance apply to memory as to artistic, musical, and literary abilities.

### MECHANICAL ABILITIES

There is plenty of evidence to prove the inheritance of mechanical ability. Even in early colonial days when the opportunities to express mechanical tendencies were slight, there are outstanding illustrations of the persistence of this specific talent in many families.

The Pomeroys of Massachusetts and Connecticut is a family in point. Some of the best known of the Pomeroys were Eltweed Pomeroy (1630) of Dorchester, Massachusetts, and Windsor, Connecticut; Seth Pomeroy, a famous gunsmith; Samuel Pomeroy, the pioneer manufacturer of Pittsburg, Conn.; Elisha M. Pomeroy and Benjamin Pomeroy of Wallingord, Conn.

The history of the Fairbanks family of St. Johnsbury, Vermont, is another example. The name of Fairbanks is well known because of the excellence of their scales and weighing devices.

The inheritance of mechanical ability seems to be much more definite than that of the other specific abilities. It seems that:

1. If both parents have outstanding mechanical ability, *all* of their children will have it.

2. If both parents lack mechanical ability, *no* offspring will have it.

3. If both parents lack mechanical ability and there is evidence of it in the ancestry of one parent but not in the other, *no* child will possess it.

4. If one parent has mechanical ability and the other has an ancestry that lacks it, then the children will *not* have it. If the parent who lacks mechanical ability comes from an ancestry that has exceptional mechanical ability, a large proportion of the children will have it.

5. If both parents have slight mechanical skill but one parent is descended from ancestry that has considerable mechanical ability, then such abilities will appear in approximately *one child in four.*

Dr. Stenquist says "At least 20 per cent of the pupils from a typical school who are below average in general abstract intelligence are above average in the kind of ability required in four mechanical tests."[20]

Dr. Toops says: "The correlation between general mechanical ability and general intelligence in equal age groups is only about +.20."[21]

### Literary Talents

The inheritance of the ability to express oneself in literary form is commonly recognized and is easily proved by innumerable cases, especially by a study of any of the families of famous authors.

A study of family records seems to justify the same conclusions as for artistic talent and musical ability, *i.e.:*

1. If both parents have literary talent, *all* the children will be talented along literary lines.
2. If both parents are devoid of literary talent and come of a non-literary ancestry, the children will have *little* literary ability.
3. If both parents have no literary ability but some ancestry that shows literary talent, then *some* of the children will have talent along those lines.

### Artistic Talents

Artistic talent, shows itself so early as to demonstrate its innateness. A study of many family records indicated that:

1. If both parents have high artistic ability, the children, with few exceptions, will be artistic.
2. If both parents have no artistic talent and *come from inartistic ancestry, none* of the children will be artistic.
3. When one parent is artistic and the other neither artistic nor of artistic ancestry, then *probably none* of the children will have high artistic talent.
4. If one parent is artistic and the other not, but does come of artistic ancestry, then the children will be artistic.

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[20] Stenquist, J. L., "The Case of the Low I.Q.," *The Journal of Educational Research*, vol. iv, pp. 241–254.

[21] Toops, H. A., "The Technique of Vocational Guidance as Investigated by the Institute of Educational Research," *National Vocational Guidance Association Bulletin*, Jan., 1923, pp. 86–93.

## MUSICAL ABILITIES

Musical abilities are qualities which develop so early that their innateness cannot be questioned.

A study was made of 1,008 children, their parents, and most of their grandparents. The following rules were deduced from the data gathered:

1. When both parents are exceptionally good in music (whether vocal or instrumental), *all* the children are medium to exceptionally good.
2. When both parents are poor in musical ability and come of ancestry that lacks on one or both sides such ability, the children will all be non-musical.
3. When one parent has high musical ability and the other has little, the children will vary much in this respect. A study was made of 257 children of such mating, and 45 were found to be without musical ability, 84 exceptionally good at music, while 128 were intermediate.

Experiments now under way seem to show that there is only a low correlation between general musical ability and general intelligence.

When discussing this topic we shall use the plural "abilities" rather than the singular "ability," because it is possible to "break up" or "tease out" or analyze any ability in one general field, such as music, into several more special abilities in that field, such as ability to sing solos, to play a piano, a drum, or a harp, etc.

Our study of unit characteristics or talents and their inheritance for the purpose of analysis should not blind us to the fact that many of these talents are often present in one person in various combinations and in varying degrees. Furthermore, we must always keep in mind that some of these talents appear only when an opportunity is offered that favors their appearance, and that some of them appear more vigorously at one time of life than at another. In general, however, it may be accepted that these talents force themselves into attention by virtue of their existence, apparently, in many cases, disregarding the opportunity for logical expression.

## HEALY'S DISCUSSION OF SPECIAL ABILITIES[22]

Some curious examples of the *disproportionate growth of certain mental abilities* in the feebleminded could be cited from literature or from our own experience. There is the instance of the great mechanical and constructive genius whom Tredgold (page 275) describes at length. This man produced the most ingenious and complicated *mechanical* devices. Others have described mentally defective *arithmetical* geniuses. One of the commonest abilities to be exaggerated above the general level is that of *musical talent.* A fine instance of this sort was Blind Tom, whose accomplishments on the pianoforte were like a mountain height arising from the plane of his general mental disability. We have ourselves described (Healy, 369) an individual with fairly marvelous powers of recall by methods of *visualization*, who can perform mental feats quite beyond the abilities of his normal fellows. Through prolonged self-training in the use of his special *memory faculties*, this low-grade moron tells days and dates so rapidly that he has been regarded as a calculating genius. His total ability, however, appears to rest upon his power of recalling occurrences in connection with their dates as observed for many years by the calendar, and recalling them largely by means of mental pictures. Since *motor ability* has been held by some experienced observers of the feebleminded to be one of the safest criteria for their diagnosis, one might mention the case of a champion lightweight prize fighter of a few years back. He was said to be the very surest and swiftest hitter, his motor reactions were always a little quicker than those of his opponent—hence his prowess, although in general mental ability he was well within the limits of feeblemindedness.

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[22] HEALY, WILLIAM, *The Individual Delinquent*, Little, Brown, and Company, 1915, pp. 269–272.

Except when exploited under management, none of these special abilities make for social success, and they do not cover up at all the evidences of the general low level of mental ability. For our purposes, they require no further consideration.

*Special Abilities Socially Significant.*—Arising from a general low level of intelligence, there may be special mental abilities which, on account of their relationship to social conditions, are of great import. The social demand for mental powers is often satisfied with very limited exertion of certain faculties. However, the types of mental ability which, being present among general mental disability, leave the individual apparently or actually socially acceptable are limited in number. We shall deal with those which have appeared of foremost importance in our observations of criminalistic tendencies. There is (*a*) the defective individual who has good insight into his own mental limitations, and who, on account of the possession of some elements of good judgment, proceeds to avoid as much as possible sources of discouragement or danger, and who limits his occupations to lowly fields where he is successful and comparatively free from temptation. (*b*) Then there is the individual who, perforce of *good physical control*, so-called *motor ability*, is able to do good work and perhaps earn well, and who has some powers of judgment, enough at least to keep out of social conflicts, or out of trouble severe enough to prevent his being considered thoroughly undesirable socially. Since insight without *industrial ability* is not at all likely to help one to hold much of a place in the world, the two types (*a*) and (*b*) will best be discussed together. (*c*) Then there is that most important type of the feebleminded with special abilities, the defective with *marked verbal powers*. The social, as well as the psychopathological, importance of this type can hardly be over-estimated, and acquaintance with this subspecies should be had by every jurist and criminal lawyer, and by every social worker. We have seen many egregious examples of the troublesomeness of members of this class, who have long passed unrecognized as defectives.

*Special Abilities.*[23]—On account of their importance, and also because they are not always to be considered in a vocational light, special abilities may be dwelt on apart from the matter of the previous section. Tests for special abilities may be presented and, naturally, in the form of selected tasks. What emphasis to place on the possession of special talents may be gathered from the relevant facts presented in our practical study of delinquents. *The need for self-expression forms in some persons the soil from which misconduct springs.* The first abilities that come to the reader's mind are, no doubt, those connected with the artistic world, where the peculiar mental traits connected with genius and ardent desire for self-expression are so well recognized. The mere desire to shine in any of these fields may be exotic, however, and bespeak no corresponding natural faculty. The only way to determine such ability is to have people competent in the artistic world sympathetically conduct a special test. Even if discovered, the presence of *artistic ability*, as we know only too well, does not guarantee freedom from delinquency; but that full exercise of native talents does bring about immensely favorable changes in some careers we also have reason to know.

Other special abilities may be more easily reckoned with. A boy may have *capacity for mechanical pursuits*, powers he has never had a chance to know he possessed, and which prove his saving grace. Not a few girls with real *histrionic ability* have become delinquent in the search for self-expression. Their abilities and desires might have been recognized and utilized, in ways quite normal and moral, and quite apart from the public theater.

I am not sure but that I should include under this head of special abilities the *peculiar sagacities and capacities which make for success in the great out-door world*. The capacity of a man for solitude and hardship, and for overcoming the difficulties of nature, and *the ability keenly to observe* and reason on natural phenomena, and the desire for large freedom, and for long stretches of muscular activity, mark a man as having peculiar adaptabilities just as much as do his possession of qualities which will make him an artist. While these traits are hardly open

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[23] *Ibid.*, pp. 76–78.

*to laboratory testing, another field of trial may be found in the larger world, from which we gather, after all, many facts for our psychogram.*

Knowledge of *special abilities in the field of imagination* may be worth testing for. Simple devices, such as the well-known ink-blot test, (*vide* Binet and Whipple, page 430) where the subject is asked what he can imagine a certain irregular blot looks like, have been used. Much more important, of course, is the use of imagination in the artistic and literary fields. Recognition of the latter is possible by obvious methods, and has led to successful careers. The writing of a story which has been read some days previously may be demanded, and, if the subject is told to give full sway to his powers, the possession of imagination can usually be determined from one such production. We have had reason to recognize practical connection, at first not obvious, between the possession of the imaginative faculty and a tendency to delinquency. It is Stemmermann who tells of a delinquent who long continued his career of swindling and misrepresentation, until he found expression for his imaginative powers in the field of journalism.

A familiar field for the use of the imagination in the modern world is that of invention. It might be more or less easy to test abilities in this direction, and one would certainly like to see something of this sort done. Terman has suggested a simple way of bringing out what might be called the first principles of this ability. His test consists of the offering of five sets of chains of three links each. The subject is asked to figure out how these could all be welded into one chain with breaking and welding only three of the links. By such methods, carried to any desired complexity, no doubt a great deal of the subject's power of imagination and invention could be learned.

## SPECIAL TALENT IN DRAWING [24]

As stated in the Preface, this investigation forms a part of an extensive study of the gifted child. In a consideration of superior endowment one may distinguish *a priori* two general types. The first is that of high general ability. The child stands above the average of the group in all of his school work. In tests of general intelligence he ranks above age. On the other hand, there are those who appear to have abilities more or less specialized. By endowment or by training they are so equipped as to take special interest in, and to succeed extraordinarily well with, some one activity. *Perhaps in comparison with their fellows they are particularly good in language, in music, in constructive work, or in drawing. They may or may not belong to the class described as having high general ability, but for doing the particular thing under discussion they do show special aptitude.*

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[24] MANUAL, HERSCHEL T., *Talent in Drawing*, Public School Publishing Company, Bloomington, Ill., 1919.

This specialized ability we shall call "talent." And it is to this part of the general problem of the gifted child that the attention of the author has been directed. After some preliminary survey it was decided that it would be best, in consideration of the time which could be devoted to the unit of research then projected, to limit the study to investigation of one particular form of talent. Drawing was chosen as the activity of greatest promise for the immediate purpose. (Pages 1-2.)

*The investigation has revealed great individual differences in the mental and physical characteristics of persons who are talented in drawing.*

## THE INSTINCT OF WORKMANSHIP[25]

*The Instinct of Workmanship and the Desire for Excellence.* The gifted economist Veblen uses as a pillar for his doctrines of human productive labor the existence of an "instinct of workmanship," which he defines as follows:

"He (man) is an agent seeking in every act the accomplishment of some concrete, objective, impersonal end. By force of his being such an agent, he is possessed of a taste for effective work, and a distaste for futile effort. He has a sense of the merit of serviceability or efficiency and of the demerit of futility, waste, or incapacity. *This aptitude or propensity may be called the instinct of workmanship.*"

*Abilities May Have the Force of Instincts.*—What is an ability? All brains, in their instinctive portions, map certain fundamental features of the environment, to which we must all respond. But, in addition, each brain has its own special centers, especially strong, in which are mapped with great ease, music, or colors, or words, or what not. *Such a trait, insuring ready control over some kind of subject matter, is called an ability. It differs from instinct in being a personal, individual trait instead of being common to all, and* in requiring teaching and practice to call it out and develop it.

*But ability is inborn,* and often more strongly inborn than some of the instincts in the same brain.[26]

## TRAITS[27]

That traits are inherited has been known since man became a sentient being. That children are dissimilar combinations of characteristics has long been recognized. That characteristics have a development in the child is equally obvious; but the mechanism by which they are trans-

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[25] See THORNDIKE, E. L., *The Original Nature of Man*, Teachers College, Columbia University, New York, 1920, pp. 143–4.

[26] LA RUE, DANIEL W., *The Child's Mind and the Common Branches*, The Macmillan Company, New York, 1924, p. 54.

[27] DAVENPORT, C. B., *Heredity: Its Relation to Eugenics*, Henry Holt & Company, New York, 1911.

*to laboratory testing, another field of trial may be found in the larger world, from which we gather, after all, many facts for our psychogram.*

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It is just as important and necessary that he should not be assigned to a job or type of work for which he has not the *special aptitude,* which an analysis of the job or type of work shows is necessary to success.

In our modern industrial organization with its present enormous labor turnover, it is necessary continually to introduce a stream of new workers into the personnel. For an illustration of the use of aptitude tests for this group, let us take the case of a 16-year-old boy or girl who has applied for work. He or she may have had no experience at any kind of work, or may have had experience at some jobs that have little correlation to the kind of work we can offer. In other words, we can measure his physical and educational qualifications, but he has no trade skill to be measured. For the sake of efficiency and the happiness of the worker, it is necessary that we provide some method whereby we can discover whether this boy or girl is likely to make a success at the work we have to offer, or for the several jobs to which he or she might be assigned, to discover at which job they would most likely be most successful.

In the past the custom has been to try out the candidates on the job. If they are satisfied and successful the employer keeps them; if not, he fires them or they quit. This is an unscientific, inefficient, and expensive method. It is one of the chief causes of our present large labor turnover, which is such an outstanding indication of our present poor methods of employing, and handling labor. It slows down production and, most disastrous of all, it creates within the worker a sense of dissatisfaction, of failure, and of being treated unfairly.

Furthermore, this method fails even with the group that is successful. If we take two workers who produce the same amount of work each day and, from the standpoint of production, are equally successful, one may be doing this amount easily and without any great expenditure of effort, while the other may be exerting himself to the point of over-work and extreme fatigue to accomplish the task. The latter worker will very soon degenerate nervously and physically, and become a common grouch and possible trouble maker, because he knows he is working to his utmost limits and soon feels dissatisfied with his wage for such strenuous effort kept up day after day. Even though the wage may be increased, the conditions which lie at the base of the difficulty are not removed.

The following four capacities or aptitudes are suggested for experimentation: (1) the capacity to visualize, *i.e.*, *visualizers;* (2) the capacity to retain and recall sounds, *i.e.*, *audiles;* (3) the capacity for the manipulation of tools, materials, and processes *i.e.*, *manipulators;* (4) the capacity to analyze, *i.e.*, *analyzers.*

**1. Visualizers.**—A visualizer is a person who has the mental ability to visualize objects he has seen, and especially to visualize things he has not seen. As an illustration of this, suppose we are interviewing two boys who desire to learn the trade of pattern-making. Both boys have an elementary knowledge of mechanical drawing, acquired in the public schools, and in all respects they seem to be equal. The pattern-making trade calls for the special ability of being able to visualize. This being the case, suppose that we say to these boys:

> I want you to draw for me on this piece of paper, as quickly as you can, a free-hand projection drawing of a wooden ring, 8 inches outside diameter, 4 inches inside diameter, with a cross-section that shows the correct diameter of the ring. This ring is to be divided into six equal sections, each succeeding section to be painted red, black, and white.

Repeat these instructions slowly and distinctly.

If one of these boys is a visualizer, *i.e.*, has the power to see a mental picture of the wooden ring in its proper proportions, with its six equal sections painted the three proper colors, he will quickly and readily make a fairly accurate drawing of the ring, and, if he had the time, the tools, the machines, and the skill, he could turn this ring from these directions. If the other boy did not have the power to call up a mental picture of this wooden ring, he would be much slower and would have to exert very much more effort to draw or make the ring, and, even if he could make or draw it, it would quite likely be inaccurate in many respects.

Another test is as follows: Say:

> Suppose that we had a 3-inch wooden cube. It is painted black. Tell me (1) How many saw cuts would be required to cut the 3-inch cube into 1-inch cubes? (2) How many of the 1-inch cubes would have three faces painted black? (3) How many two faces painted black? (4) How many one face painted black? (5) How many no faces painted black?

On analysis we find that, at certain jobs, occupations, trades, and professions, the person with an aptitude for visualization, all other things being equal, will prove more successful than the person who has no such aptitude. A pattern maker is given verbal instructions or a blue print and asked to produce a complicated pattern. It must be accurate in all its dimensions and parts. It is a necessity that a pattern maker be able to visualize the finished pattern after listening to the instructions or reading the blue print. An architect must have the same aptitude. The best architects have the ability to visualize a building complete in all its details before they draw a line on paper. The dressmaker or milliner who does custom work must have the same ability. The draftsman and the carpenter must have this ability in more or less degree for highest success with the least effort.

### THE THURSTONE-JONES SPATIAL RELATIONS TEST[29]

A beginning has been made on the problem of testing visual imagery, as is shown in the following unpublished experimental spatial relations test.

*Instructions.*—1. All the following problems have some element of *space thinking* or *mental picturing* embodied in them. It is the purpose of these problems to test your ability to make and retain mental pictures. This is not an intelligence test.

2. The ability to form these mental pictures is essential for success in many vocations.

3. Do precisely what the instructions tell you to do.

4. Work as rapidly as you can without making mistakes.

5. Speed and accuracy are *equally* important.

6. A certain amount of time will be allowed for each series of problems. When the instructor indicates that the time is up, turn to the next problem immediately, even if you have not finished. You will not have time to finish some of the problems.

7. The first two pages consist of practice problems similar to those in the test. Work these practice problems and make certain that you understand what is required. Do not look at Problem I of the test until told to do so by the examiner.

8. As soon as you finish the tests, hand your papers to the examiner.

9. Fill in the following blanks first.

Your name:...................................................................
*Last name* *Initials*

Date:.......................................College:..........................
Employer:................................School:...............................

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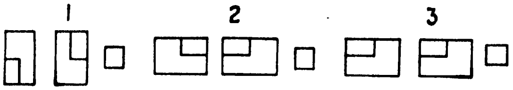
[29] THURSTONE, L. L. and JONES, W. B., Address, Dr. Thurstone, University of Chicago, Chicago, Ill.

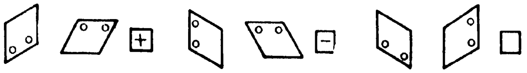
**Inside this booklet you will find a lot of things to do. Samples of all different kinds of things to be done are given below. Read the samples and directions carefully.**

(*a*) Decide if these two pictures of the same flag show the same face of the flag. If so, place a plus (+) sign in the small square. If not, place a minus (−) sign in the small square.

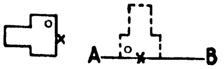


The first two pictures, if placed one on the other, appear as one. Therefore + is placed in the square. This is also true of the third, but not of the second.

(*b*) In a similar manner decide on the following diagrams. These diagrams represent a card with two holes punched through it. If they represent the same side of the card, mark plus in the small square, and minus if not the same side. Try the last set.

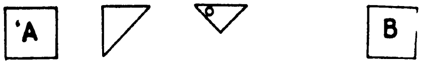


(*c*) In the following three figures, the first represents a card with a hole punched in one corner and a dotted line representing one edge. The last two figures represent outlines of the same size as the card. Pick up the card in your "mind's eye" and *turn it over*. Then place it in one of the outlines, with the dotted side of the card on the dotted lines, under the outlines. It will only fit in *one* of the outlines.

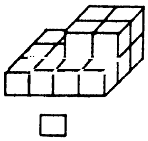


(*d*) Turn the following diagram over showing the opposite side. Sketch the diagram in a new position on line *A-B*, so that the side marked *X* will line on line *A-B*. Show the position of the hole on each sketch.

(*e*) A square sheet of paper is folded twice as shown in the following diagrams. A hole is then punched in the corner. Show on figure *B* where the holes would appear when the paper is unfolded.

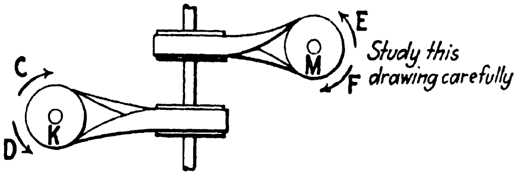


(*f*) Below is a figure built of cubical blocks. Count the number of blocks required to build the figure. Put the number in the square below the figure.

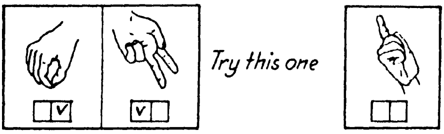


(*g*) Think of two bricks placed on the other in all possible ways. Give the total height of each combination.

(*h*) Figure below represents four pulleys. When the pulley *K* runs in the direction of the arrow at *C*, in which direction will pulley *M* run (*E* or *F*)?



(*i*) Below is a picture of a hand. If it represents a right hand place a check mark in the right-hand square below the figure. If it is a left hand, place a check mark in the left-hand square.



(*j*) The streets of a city are laid out north, south, east, and west. A street car starts up town (north) two blocks, turns west . . . . . . . . . . . two blocks, then north . . . . . . . . . . on block, then east . . . . . . . . four blocks. Indicate directions by the words *right* and *left* instead of north, east, etc. This refers to the motorman's right or left, facing forward.

(*k*) If the hands of a clock were interchanged so that the small hand would be where the big hand is, what time would 15 minutes after 7 become?

When the examiner gives the signal, begin at the top of the next page and work through the book.

There are 11 series of problems, samples of which have been given. Directions are printed at the beginning of each series to make certain that you understand what is to be done. Read these directions before starting the problems.

The examiner will indicate when to start a new series of problems. But if you finish a series before the signal, proceed at once to the next series.

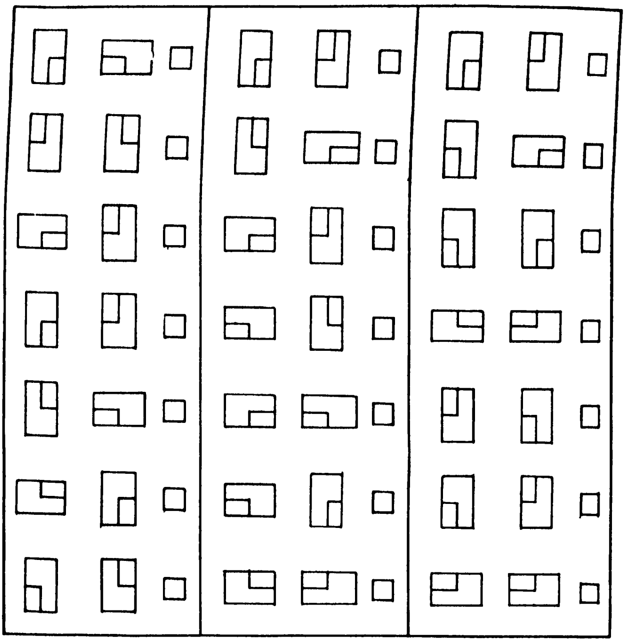
*Do not turn over this page until the signal is given.*

### Problem I—Flag Test

*Instructions.*—All the following diagrams represent the same flag. Some of these pictures show one face of the flag and some show the other.

. If the first pair of pictures shows *the same face*, put a *plus sign* in the small square to the right, but if they show *the opposite faces* of the flag, put a *minus sign* in the small square.

Do likewise for all succeeding pairs of pictures.



## Problem II—Directions Test

*Instructions.*—Make a mental picture of some streets with which you are familiar. Sketching is not permitted.

The streets of a city run north and south, east and west. A traveler is facing south. He asks for directions to go to a certain place and is told: "Go ahead three blocks, turn west and walk two blocks, then turn north. Your house is the third house on the west side of the street."

Fill in the blank spaces below, using the words *right* and *left* instead of the words north, south, east, and west, so that the meaning will be the same. Remember that points of the compass, east, west, etc., always remain the same, no matter in which direction you walk. But that the terms *right* and *left* always have reference here to the *right-* or *left-hand side* of the person, regardless of the direction in which he is facing. Use abbreviations *R* and *L* for right and left.

(*a*) "Go ahead three blocks, turn to your .......... and walk two blocks, then turn to your ........... Your house is the third house on the .......... side of the street."

(*b*) The aisles of a department store go north and south, east and west, resembling streets of a city. There are two elevators, one at the north end and the other at the south end of the building. A customer comes up the elevator at the south end of the building to the third floor, and faces north.

He starts up the center aisle north two aisles, turns west .......... three aisles. He turns north .......... two aisles, then turns east .......... one aisle. Then turns north .......... three aisles, then east .......... one aisle to the center aisle and proceeds to the elevator at the north end of the building. He descends on the elevator to the second floor and faces south. He turns west .......... two aisles. Then proceeds south four aisles, turns east .......... two aisles, faces south and proceeds to the south elevator and returns to the first floor.

(c) When a baseball diamond is laid out properly, the pitcher faces west toward homeplate, his left arm toward the south (origin of the term "south paw"), and right arm to the north, and, of course, his back toward the east.

*Make a mental picture of a baseball diamond and follow these plays:*

A batter makes a two-base hit. The coach runs from the vicinity of homeplate to his position at third base. The next batter up makes a single. The runner on second tries to advance to third, but the ball is thrown to the third-base man, the runner advancing from second base stops, and returns to second base.

Indicate by such terms as southeast, northwest, etc. the direction each player, including the coach, moves in the above plays. (Use abbreviations, S.E., N.W., etc.)

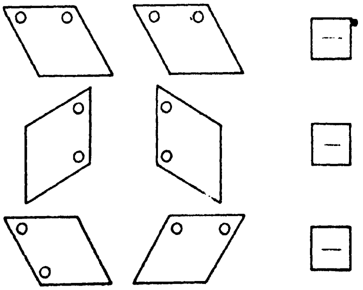
First batter runs....................to first base, touches it and runs..............to second base The coach runs..............to third base. The next batter runs..............to first base. The runner on second base runs..............toward third base and returns ..............to second base.

## Problem III—Card Test A

In this test you will be shown a series of diagrams. The diagrams represent a card with two holes punched through it. All diagrams represent the same card.

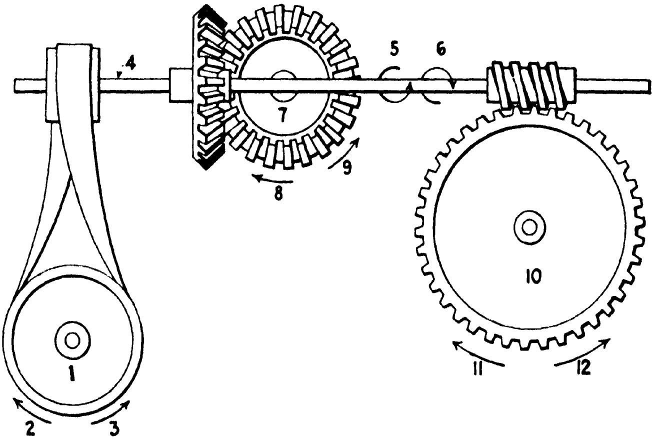
If the first pair of diagrams represent the same face of the card, put a plus sign in the small square to the right. If they represent the opposite faces of the card, put a minus sign in the small square. Do likewise for each succeeding pair of diagrams as shown in the three following examples.

Work as rapidly as you can without making mistakes.



### PROBLEM IV—GEAR TEST

*Instructions.*—The accompanying diagram illustrates several kinds of mechanical devices.



On each one of the blank spaces below put a number so that the statements will properly describe the diagram on the next page.

When the wheel 1 starts to move in the direction of the arrow 2, the wheel 7 will start to move in the direction of arrow No. ...........

When the shaft 4 starts to move in the direction of the arrow 5, the wheel 1 will start to move in the direction of arrow No. ...........

When the wheel 1 starts to move in the direction of the arrow 3, the wheel 10 will start to move in the direction of arrow No. ...........

When the wheel 7 starts to move in the direction of the arrow 8, the wheel 1 will start to move in the direction of arrow No. ...........

When the shaft 4 starts to move in the direction of the arrow 5, the wheel 10 will start to move in the direction of arrow No. ...........

When the wheel 7 starts to move in the direction of the arrow 9, the shaft 4 will start to move in the direction of arrow No. ...........

### PROBLEM V[30]—BLOCK-COUNTING TEST

*Instructions.*—Here are some figures built out of cubical blocks. All the blocks are the same shape and size.

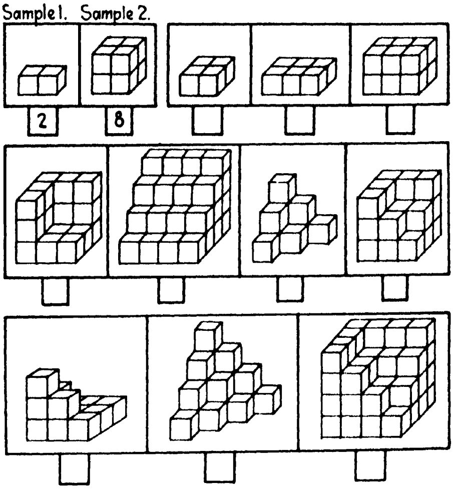
In this problem, you are to *count the number of blocks you would need to build figures like those shown in the pictures.* Think how the figure would look from all sides; remember that you may need more blocks than the ones you can actually see in the picture.

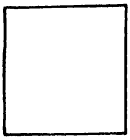
Write the number of blocks you would need to build each figure in the little square just below it. Look at sample 1. This can be built with two blocks, so 2 is written in the little square.

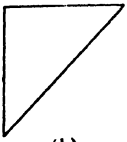
[30] Taken from Paterson Tests.

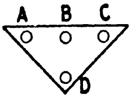
Look at sample 2. You would need eight blocks to build this. There are four on the side nearest you and, of course, the other side is just like it, so 8 is written in the little square.

Find out how many blocks are required to build each figure, and write the correct numbers in the little squares. Work as rapidly as you can without making mistakes.

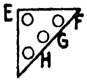



(a)

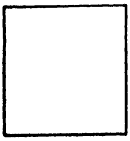

(b)

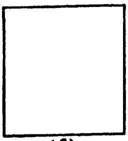


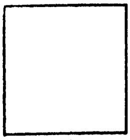
(c)

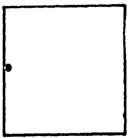


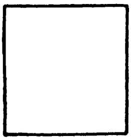
(d)

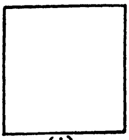

(e)

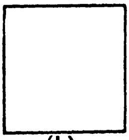

(f)

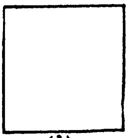

(g)


(h)


(i)


(j)


(k)


(l)

*Instructions.*—*a* represents a square sheet of paper. It is folded so that it has the shape indicated in *b*. It is folded again so that it looks like *c*.

Show by drawing small circles in *e* where the holes would be if the folded paper were punched at *A*.

Do likewise in *f* to show where the holes would be if the folded paper were punched *only* at *B*.

Do likewise in *g* for hole punched *only* at *C*.

Do likewise in *h* for hole punched *only* at *D*.

Imagine that the paper in *c* is folded again so that it looks like *d*.

Show by small circles in *i* where the holes would be if the folded paper were punched *only* at *F*.

Do likewise in *k* for hole *punched* only at *G*.

Do likewise in *l* for hole *punched* only at *H*.

## PART TWO

*Instructions.*—1. Proceed in this part of the test as in the first part.
2. Do precisely what the instructions tell you to do.
3. Work as rapidly as you can without making mistakes.
4. Speed and accuracy are *equally* important.
5. Wait for the signal to be given before going to the next page.
6. Fill in the following blanks first.

Your name :.................................................................
*Last name* *Initials*
Date:.................................College:.......................
Employer:.................................School:.......................

## PROBLEM VII—CARD TEST B

*Instructions.*—Assume that the diamond-shaped figure with a circle in it represents a small card with one of its edges indicated by a dotted line.

The capital letter *A* is placed on the side of the card turned up in the samples below.

Imagine that this card is *picked up and turned over*, showing the opposite side.

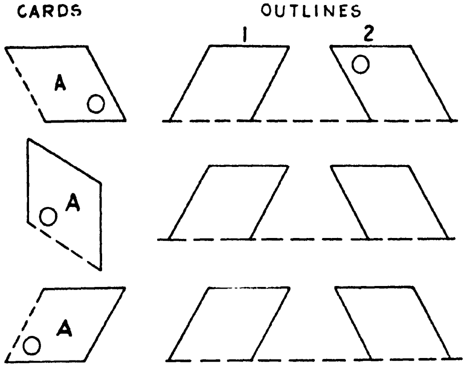
Place the card in one of the two diamond-shaped outlines to the right, so that the dotted line on the card will lie on the dotted line below the outline. The card can be placed correctly only in *one* of the outlines.

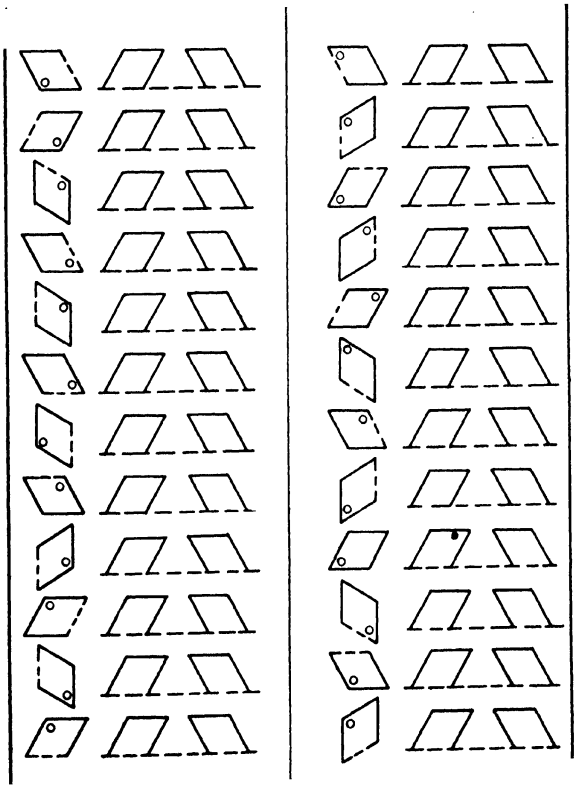
Remember you must *turn the card over*. By so doing the letter *A* on the card *will not be seen* in the new position.

With your pencil *draw a circle in the corner of the outline where the hole will be*, when the card is placed properly.

Try the samples below, then proceed in the same manner, as rapidly as you can with the outlines on the opposite side of this page.

The first example is marked correctly in the second outline. The letter *A* on the card board cannot be seen.


CARDS
OUTLINES
1
2
A
A
A



### PROBLEM VIII—BLOCK MEASURE TEST

*Instructions.*—A block of wood is measured and found to have the dimensions 2 by 2 by 6 inches; the ends are 2 by 4 inches, and the edges are 2 by 6 inches. This block will be referred to as block *A*.

A second block, *B*, is also measured and found to be exactly the same size and shape as the one just described.

Now imagine that these blocks are placed *one on top of the other* in various ways as follows:

Before you begin, form a mental picture of the blocks.

*Do no sketching in this problem.*

The block *A* is placed with its face down. On top of it is block *B* with its edge down. The total height is .......... inches.

The block *B* is placed with its face down and has a 2-inch cube on top of it. The total height is .......... inches.

The block *B* is placed with its edge down. On top of it is block *A* with its end down. The total height is .......... inches.

The block *B* is placed with its end down and has a 2-inch cube on top of it. The total height is .......... inches.

The block *A* is placed with its face down. On top of it is block *B* with its face down. The total height is .......... inches.

The block *A* is placed with its face down and has a 3-inch cube on top of it. The total height is .......... inches.

The block *B* is placed with its end down. On top of it is block *A* with its face down. The total height is .......... inches.

The block *A* is placed with its end down and has a 1-inch cube on top of it. The total height is .......... inches.

The block *A* is placed with its end down. On top of it is block *B* with its end down. The total height is .......... inches.

The block *B* is placed with its edge down and has a 1-inch cube on top of it. The total height is .......... inches.

### PROBLEM IX—CLOCK TEST[11]

*Instructions.*—Assume that the hands of a clock were interchanged so that the small hand would be where the big hand is. If this were done at the following hours of the day, what time would the clock indicate, *roughly? Within 2½ minutes is scored correct.*

Write your answers on the blank spaces below as shown in the samples.

Try to picture in your "mind's eye" some familiar clock.

*Samples* { Nine minutes after ten becomes 1:50.
Nine eighteen becomes 3:46.

Twenty-two minutes after six becomes ..........
Three thirty-six becomes ..........
Fourteen minutes of two becomes ..........
Seven forty-eight becomes ..........
Five minutes of twelve becomes ..........
Twelve o'clock becomes ..........
Twenty-eight minutes after six becomes ..........

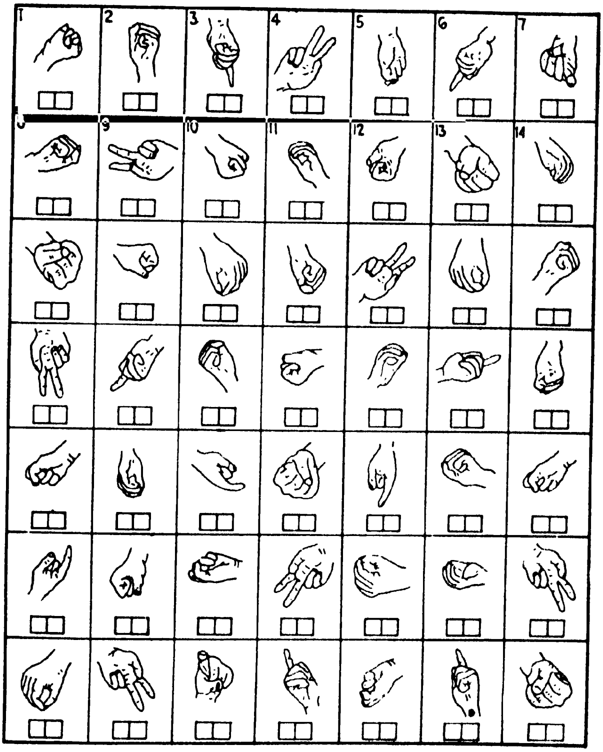
---

[11] Taken from Binet-Simon Tests.

## PROBLEM X—HAND TEST

*Instructions.*—In this test you will be shown a series of pictures of hands. Some of these pictures represent right hands, others represent left hands. Below each picture you will find two small squares. If the picture represents a right hand, put a check mark in the right square; if it represents a left hand, put a check mark in the left square.

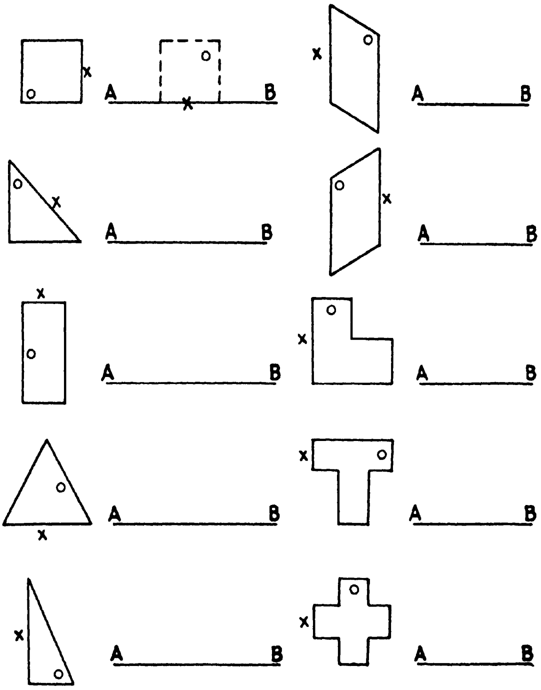
Turn over this sheet and work as rapidly as you can without making mistakes.



## PROBLEM XI—SKETCHING TEST

*Instructions.*—*Turn the following diagrams over*, showing the opposite side. Sketch the diagram in new position on line *A-B*, so that the side marked *X* will lie on line *A-B*.

Show the position of the hole on each sketch. The sample below is shown sketched correctly.



### Problem XII—Visual Memory Test

(*a*) Close your eyes. Make a mental picture of the pulleys (wheels) shown on the third page of these instructions and sample problems of this booklet. Do not rush this test. You will have plenty of time to complete. Do not refer to the pictures.

Read the following questions and from your mental picture write the answers. Put answers in squares.

1. How many pulleys (wheels) are shown?......☐
2. How many belts (leather straps) are shown? ☐
3. How many shafts (axles) are shown? ........☐

4. When the wheel furthest to the left turns the same way that clock hands turn, the wheel furthest to the right turns: Check your answer in one of the squares.

The way clock hands turn.☐
Opposite way..........☐

4. When the wheel in the center turns the way clock hands turn, the wheel furthest to the left turns:

The way clock hands turn.☐
Opposite way............☐

(*b*) Close your eyes. Make a mental picture of the figure showing cubical blocks on the third page of instructions and sample problems of this booklet.

In the same manner as above, answer the following questions:

1. How many blocks are required to build the figure?..........☐
2. How many blocks on the first level? (One block high.)......☐
3. How many blocks on the second level? (Two blocks high.)..☐
4. How many blocks on the third level? (Three blocks high.)..☐
5. The blocks on the second level are grouped in:
   Upper left-hand corner.☐ Upper right-hand corner.☐
   Lower left-hand corner.☐ Lower right-hand corner.☐

Finish this test and give your booklet to examiner.

**2. Audiles.**—An audile is a person who has the power to retain and recall sounds easily and readily. He has a strong audile memory. He can recall and reproduce sounds almost automatically with little effort. He is able to distinguish fine differences in sound that would be imperceptible to those who do not possess this special ability.

During the war, there was great difficulty in getting competent stenographers. In one of the offices of the War Department the work was being seriously interfered with because of the scarcity of stenographers and the incompetency of those who were available. The stenographer, to be really successful, must have a strong memory for sound. A ten-minute test for audile memory was prepared and all applicants for positions were tested. As a result, much more work was done and done better, with a smaller force and with much less disturbance and effort. Musicians, salespeople, order clerks, messengers carrying verbal messages, telephone and telegraph operators, reporters, etc. must have this ability for the greatest success.

**3. Manipulators.**—A manipulator is one who has special ability for working with tools, material, instruments, machines, and mechanical devices of all kinds. This does not mean merely working with the hands or simple tools on simple operations which are automatic after having once been learned. It means a person who has tool sense and judgment, who can judge and compare in regard to materials and objects, who has a delicate perception for tools, objects, and materials, along with a keen sense of touch. Watchmakers, jewelers, instrument makers, spinners and weavers, machinists, tool makers—in fact, almost all the skilled industrial occupations—call for this ability.

### CHART 39.—PSYCHOGRAPH OF SPECIAL ABILITIES

File No........................
Plotted by.....................

Date..........................
Name..........................
School........................

| C.A. | | M.A. | I.Q. | Grade | | Score, per cents | Arithmetical | | Manual | | | Linguistic | | Literary | | | Visualizer | Audile | Manipulator | Analyzer |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Mechanics | Problem solving | Hand work | Drawing | Writing quality | Dictation | Reading | Composition | History | Geography | | | | |
| 9 | 3 | | | 3 | A | 100 | | | | | | | | | | | | | | |
| | 6 | | | | | 95 | | | | | | | | | | | | | | |
| | 9 | | | | B | 90 | | | | | | | | | | | | | | |
| 10 | 3 | | | 4 | A | | | | | | | | | | | | | | | |
| | 6 | | | | | 85 | | | | | | | | | | | | | | |
| | 9 | | | | B | 90 | | | | | | | | | | | | | | |
| 11 | 3 | | | 5 | A | | | | | | | | | | | | | | | |
| | 6 | | | | | 75 | | | | | | | | | | | | | | |
| | 9 | | | | B | 80 | | | | | | | | | | | | | | |
| 12 | 3 | | | 6 | A | | | | | | | | | | | | | | | |
| | 6 | | | | | 65 | | | | | | | | | | | | | | |
| | 9 | | | | B | 60 | | | | | | | | | | | | | | |
| 13 | 3 | | | 7 | A | | | | | | | | | | | | | | | |
| | 6 | | | | | 55 | | | | | | | | | | | | | | |
| | 9 | | | | B | 50 | | | | | | | | | | | | | | |
| 14 | 3 | | | 8 | A | | | | | | | | | | | | | | | |
| | 6 | | | | | 45 | | | | | | | | | | | | | | |
| | 9 | | | | B | 40 | | | | | | | | | | | | | | |
| 15 | 3 | | | 1. H. S. | | | | | | | | | | | | | | | | |
| | 6 | | | | | 35 | | | | | | | | | | | | | | |
| | 9 | | | | | 30 | | | | | | | | | | | | | | |
| 16 | 3 | | | 2. H. S. | | | | | | | | | | | | | | | | |
| | 6 | | | | | 25 | | | | | | | | | | | | | | |
| | 9 | | | | | 20 | | | | | | | | | | | | | | |

| | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 17 | 3<br>6<br>9 | | | 3. H. S. | 15<br>10 | | | | | | | | | | | | | | |
| 18 | 3<br>6<br>9 | | | 4. H. S. | 5<br>0 | | | | | | | | | | | | | | |
| 19 | 3<br>6<br>9 | | | | | | | | | | | | | | | | | | |
| 20 | 3<br>6<br>9 | | | | | | | | | | | | | | | | | | |

### THE STENQUIST MECHANICAL APTITUDE TEST[32]

Considerable work has been done on the testing of mechanical aptitudes. The most promising of these tests is that of Dr. John L. Stenquist of Baltimore, Maryland.

**4. Analyzers.**—An analyzer is one who has the mental ability to analyze and pick out the vital factor in a complex situation. All executives and administrators should have this ability. When certain proposals are laid before them, they must immediately be able to discover weaknesses, inaccurate data, and exaggerated statements. Superintendents and foremen, trouble shooters on gas engines, time-study and motion-study men, lawyers, physicians, editors—all must have this ability in more or less degree.

Very little work has been done on the testing of audile imagery and analyzing ability that is applicable to vocational guidance. Many general intelligence tests contain tests that might be adapted to testing in these two special fields.

It must be remembered that we are endeavoring to discover vocational aptitudes as presumed by the possession of special mental abilities; that these tests are useful only in vocationally guiding people into the lines of work in which it is probable that these special abilities will be of value; that many of these tests are also tests for other qualities, such as ability to concentrate, patience, persistence, etc.; and that most people have some ability along all these lines, but usually one of these abilities is stronger than the others. The strongest should be indicated by the word "major," next strongest by "minor," and third strongest by "subminor." The value of these tests can be proved by the fact that all successful people in the occupations where these special abilities are needed nearly always possess these abilities.

Chart 39, a "Psychograph of Special Abilities," has proved to be quite useful in charting certain data concerning an individual for ready reference.

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[32] STENQUIST, J. L., Address, The World Book Company, Yonkers, N. Y., 1921.

## CASE PROBLEM[33]

### ACCELERATION AND RETARDATION OF HIGH SCHOOL SENIORS

DR. WILLIAM F. BOOK, on page 69 of his *Intelligence of High School Seniors In Indiana,* The Macmillan Company, New York, 1922, gives this table:

TABLE XLII.—PERCENTAGE OF THOSE POSSESSING EACH GRADE OF INTELLIGENCE WHO WERE ACCELERATED, RETARDED, AND REGULARLY PROMOTED IN HIGH SCHOOL

| Mental ratings or grades of intelligence | Per cent accelerated | Per cent regularly promoted | Per cent retarded | Cases |
|---|---|---|---|---|
| A+ | 5.83 | 90.83 | 3.84 | 120 |
| A | 7.14 | 88.69 | 4.16 | 336 |
| B | 7.28 | 88.94 | 3.76 | 796 |
| C+ | 8.05 | 88.59 | 3.34 | 1,254 |
| C | 6.52 | 89.72 | 3.76 | 613 |
| C− | 5.36 | 90.08 | 4.55 | 1,099 |
| D | 3.68 | 92.75 | 3.55 | 759 |
| E | 2.92 | 93.43 | 3.65 | 411 |
| E− | 2.76 | 93.42 | 3.80 | 289 |
| F | 1.41 | 97.18 | 1.41 | 71 |
| Cases.......... | 383 | 5,193 | 217 | 5,748 |

### Questions

1. What explanation can there be for the high per cent retarded in the A, A+, and B groups? Should they be advised not to go to college? What more will the adviser need to know about these individuals?

2. What explanation can there be for the practically uniform rate at which the middle and superior groups are promoted? For the small number accelerated in the superior group? What factors within the secondary school system create such a condition? What factors without?

3. In such a system is the theory that "the individual must be developed to his highest capacity as an individual" being carried out? Is he being trained for efficiency and good citizenship?

4. To remedy these conditions in the average high school, what changes are necessary in the organization for instruction and for promotion; in the conception of "democracy in education?"

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[33] For the presentation of this case the author has to thank Miss Ethel Rosenberry, a student in one of his classes.

5. What experiments have been made in the field of secondary education to improve this situation?
6. Make a histogram, using for the ordinates the mental ratings and the number of cases. What is there unusual about this distribution?
7. Of what use would such a chart of your students be to you as a guidance worker?
8. Describe in detail exactly how you would proceed to obtain such a chart.

## CASE PROBLEM[34]

### THE CORRELATION BETWEEN I.Q.'S AND SCHOOL GRADES IN VARIOUS SUBJECTS

HEWES, HOLT, MERANSKI, and SNELL in "Mental Age and School Attainment of 1,007 Retarded Children in Massachusetts," *Journal of Educational Psychology*, No. 15; 297–301, May, 1924, present the following:

| | |
|---|---|
| Group Studied: | 357 girls, 650 boys.<br>Chronological age, 7–17 years.<br>Mental age, 4–14 years. |
| Tests Used: | Stanford revision of Binet-Simon tests for mental age.<br>Specially prepared tests for subjects. |

TABLE XLIII

| Subject | Correlation: mental age and attainment in school tests |
|---|---|
| Language | 0.82 |
| Arithmetic | 0.78 |
| Writing | 0.72 |
| Reading | 0.68 |
| Spelling | 0.66 |
| Geography | 0.59 |

FEINGOLD, G. A., "Correlation between Intelligence and Scholarship," *School Review*, vol. xxxii, pp. 455–67, June, 1924, presents the following:
Intelligence Test used, Army Alpha modified by Feingold.

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[34] For the presentation of this case problem, the author has to thank Miss Edna R. Bishop, a student in one of his classes.

TABLE XLIV
(Page 461)

| Subject | Number of cases | Correlation | | Recitation marks and examination marks |
|---|---|---|---|---|
| | | Intelligence and recitation marks | Intelligence and examination marks | |
| Algebra I | 160 | 0.573 | 0.538 | 0.800 |
| General Science I | 75 | 0.536 | 0.497 | 0.759 |
| Ancient History I | 121 | 0.420 | 0.413 | 0.646 |
| English I | 199 | 0.289 | 0.442 | 0.675 |
| Latin I | 120 | 0.305 | 0.384 | 0.824 |
| French I | 116 | 0.268 | 0.425 | 0.804 |
| Bookkeeping I | 170 | 0.328 | 0.379 | 0.602 |
| Domestic Science I | 28 | 0.279 | 0.256 | 0.711 |
| Shop Work I | 68 | 0.223 | 0.536 | 0.256 |
| Mechanical Drawing I | 95 | 0.270 | 0.523 | 0.303 |
| Average | ... | 0.349 | 0.439 | 0.638 |

## Questions

1. What factors, if any, enter into scholarship which are not measured by intelligence tests?
2. Upon what factors does the correlation between I.Q. and scholarship depend?
3. What is the significance of the greater correlation between recitation and examination than of either with intelligence tests?
4. Is the greater correlation in elementary school than in high school general, or are these exceptional cases? What is the significance of this?
5. Is a low correlation necessarily due to defects in the measurement of I.Q.?
6. What is the significance of the different correlation of different subjects?
7. What is the value of such data to guidance workers?

## CASE PROBLEM[35]

### PERCENTAGE DISTRIBUTION OF ARMY ALPHA SCORES FROM FOURTH GRADE THROUGH COLLEGE

The following table is presented by Griffith in his *Fundamentals of Vocational Psychology,* The Macmillan Company, New York, 1924, page 310. Arranged from data presented by Lufkin for the grades, Cobb for the high school, and Yoakum and Yerkes for the college.

[35] In the presentation of this case problem the author has to thank Miss Eva R. Goldstein, a student in one of his classes.

TABLE XLV.—ARMY ALPHA SCORES

| Year in school | D− | D | C− | C | C+ | B | A | A+B | Median score | Number of cases |
|---|---|---|---|---|---|---|---|---|---|---|
| 4 | 31 | 22 | 40 | 7 | ..... | ... | ... | ...... | 35 | |
| 5 | 4 | 21 | 32 | 36 | 7 | ... | ... | ...... | 41 | |
| 6 | ..... | ... | 22 | 64 | 11 | 3 | ... | 3 | 59 | |
| 7 | ..... | ... | 13 | 66 | 21 | ... | ... | ...... | 62 | |
| 8 | ..... | ... | 7 | 35 | 42 | 16 | ... | 16 | 79 | |
| 9 | ..... | ... | ..... | 0.517 | 46 | 31 | 6 | 37 | 96 | 1,721 |
| 10 | ..... | 0.8 | ..... | 0.86 | 35 | 43 | 16 | 59 | 111 | 1,253 |
| 11 | ..... | ... | ..... | 2 | 20 | 47 | 32 | 79 | 123 | 977 |
| 12 | ..... | ... | ..... | 1 | 16 | 46 | 37 | 83 | 126 | 621 |
| Freshmen | ..... | ... | ..... | 0.1 | 0.88 | 33 | 58 | 91 | 134 | 1,342 |
| Sophomores | ..... | ... | ..... | ..... | 1.56 | 29 | 64 | 93 | 139 | 730 |
| Juniors | ..... | ... | ..... | ..... | 0.75 | 28 | 66 | 94 | 142 | 607 |
| Seniors | ..... | ... | ..... | ..... | 4 | 20 | 76 | 96 | 147 | 410 |

### Questions

1. How do you account for the general increase in scores from the fourth to about the tenth or eleventh grades?

2. How do you account for the increase in the average score for the last two years in the high school and in the college?

3. Would the same factors hold for 1 and 2?

4. How do you account for the predominance of lower scores in grades 4, 5, 6, 7 and 8, particularly in the fourth and fifth? From this table can you draw any conclusions regarding the natural intellectual development of children?

5. With this table as a criterion how early should educational guidance begin? As early as the fourth and fifth grades? If not, how will you care for those scoring only D− and D?

6. Would you advise a young boy of 14 in grade 4 or 5 and with a rating of D− to remain in school until he completes the eighth grade?

7. Would you advise a young man past 16 or 18 with a rating below C+ to enter college? What would be the probability of his being able to finish college on his merits?

8. Would it be fair to divide these various school units into homogeneous groups for vocational guidance on the basis of Army Alpha ratings alone? What other factor or factors must you consider?

9. On the basis of intelligence rating alone, which would be easier to predict—success or failure?

10. Is it fair to use the same intelligence examination for the three school units? Would comparison be less or more readily made if three different

standardized intelligence examinations were used? For example, the National Intelligence, for the grades; Terman's Group Test of Mental Ability, for the high school; and Thorndike's Intelligence Examination, for the college. Remember that the Army Alpha may be used in secondary schools, colleges, and for adults generally.

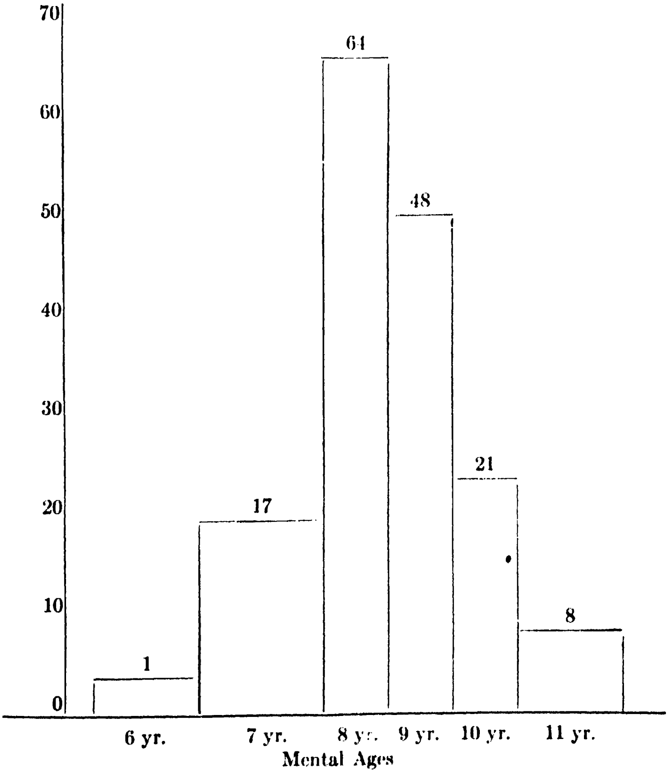
11. Are these three school units comparable?

## CASE PROBLEM[36]

### MENTAL AGES OF NINE-YEAR-OLD GROUP

On page 233 of the book *How to Measure*, by WILSON, G. M. and HOKE, K. D., Public School Publishing Company, Bloomington, Ill., appeared the following chart showing the mental ages of 159 unselected children of the chronological age of 9 (1917):

CHART 46



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[36] In the presentation of this case problem I have to thank M. A. Tighe, a student in one of my classes.

### Questions

1. Of what value is such a chart to the guidance worker?

2. How would you proceed to collect the data for similar charts?

3. Is there any special significance in intelligence testing for the 9-year-old group? Why not for the 7-year olds or 12-year olds?

4. Which of the above groups would need expert individual diagnosis and constant observation?

5. Which of the above groups would need the least?

6. How often do you think these charts should be made?

7. Should such charts be made of all children of the same chronological ages?

8. Where should such charts be kept? Why?

9. Which of the above groups could be accelerated?

10. Would you suggest a transfer from regular grades for any groups?

11. What phase of a complete guidance program do these charts represent?

12. What fundamental principles of guidance are involved?

## CHAPTER XX

# ABNORMAL BEHAVIOR CASES AND GUIDANCE DIAGNOSIS

There is considerable danger that workers in the field of psychology and vocational guidance may over-emphasize the importance of the general intelligence test and the I.Q., to the exclusion of other phases of mentality. Furthermore, it must be kept in mind that intelligence is only one—in many cases the most important one—of at least ten items upon which data must be secured to make a complete guidance diagnosis.

When making a complete mental survey of any person for the purpose of guidance, we may conceive of the mentality of that person as being classified under three general main heads. These are:

### I. GENERAL INTELLIGENCE

This may be conceived of as the capacity of the individual to adapt himself to new situations, and it is now generally accepted that it is possible to measure this capacity by means of the numerous group and individual intelligence tests.[1] Valuable as these tests are, they do not tell the whole story. It is conceived that general intelligence is merely a composite of a more or less indefinite number of special intelligences. This can readily be substantiated by an examination of some of the well-known group intelligence tests, many of which really consist of a battery of single tests in which reasoning, judgment, logic, memory, association, mathematical ability, concentration, etc. are tested, the resulting score, mental age, or I.Q. being a composite general average.

### II. SPECIAL INTELLIGENCES, DISABILITIES, ABILITIES, OR APTITUDES[2]

This topic has been discussed at length in Chapter XIX. At this point it is only necessary to say that each individual should be tested not only for the purpose of discovering the possession of any special aptitudes, capacities, or abilities that stand out beyond any others, but also to discover any special disabilities that may serve to indicate *vocations the individual should not enter.* It may be conceived that in certain individuals some of these aptitudes or special abilities may be so prominent as to overcome in a measure the disadvantage of their low level of general intelligence.

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[1] See list of intelligence tests in Appendix H.

[2] For reading list on special intelligences, see Appendix I.

Experience leads us to believe that the feebleminded possess no special talents or aptitudes that are worthy of note; that the slightly subnormal individuals of the moron type occasionally possess special abilities or aptitudes that clearly indicate the way of success for that particular individual. As we progress upward in the levels of intelligence beyond the normal persons and to the superior individuals, we find that more and more the special aptitudes decrease in importance, that is, that the very superior individual has what would amount, in an ordinary individual, to an aptitude for almost any line of work. They seem to be equally good in any field of endeavor in which they might become interested.

### III. THE FIELD OF ABNORMAL BEHAVIOR AND PSYCHOPATHOLOGY[3]

Much experimental work is being done along this line at the present time, and the present indications are that, in the field of psychiatry, standards and technique are being developed that will be of the utmost importance in the field of vocational and educational guidance. In fact, the present tendency seems to be toward the point of view that every guidance counselor will necessarily need to know considerable psychology, both normal and abnormal, and, in addition, have an intelligent understanding of the problems and diagnostic symptoms involved in the field of psychiatry.

In this particular field there is much of value to the guidance counselor. In fact, the information is so valuable that it amounts to a necessity if one is to perform the function of life guidance completely and effectively.

It can readily be seen that any abnormalities and eccentricities of behavior limit materially the range in the choice of a vocation. Furthermore, it should be remembered that these abnormalities of behavior are symptomatic of more serious conditions and, if not diagnosed and corrected, become confirmed, chronic, and very often develop into worse conditions.

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[3] For reading list, see the end of this chapter.

Mental hygiene points out many valuable diagnostic symptoms that may be used by the vocational guidance counselor in selecting or weeding out the so-called "difficult cases" that are so frequently found in our school systems.

### DIAGNOSTIC SYMPTOMS

1. **Behavior Symptoms.**—Under this heading we find habit motions, such as twisting the mouth, squinting, frowning, raising the eyebrows, picking at small objects, holding the breath, tantrums, restlessness, seclusiveness, anxiety, deceitfulness, self-justification, listlessness, sullenness, cruelty, and abnormalities of appetite.
2. **Speech defects,** such as persistent baby talk, mumbling, habitual mispronunciation of certain words after repeated correction, the changing of certain letters, such as "w" for "r," "th" for "s," "h" for "s," lisping, stuttering, and stammering.
3. **Inability to hold the urine;** carelessness about similar personal habits.
4. **Various forms of convulsive attacks** and seizures. These range from severe cases of hysteria, tantrums, and fits of unreasoning anger to cases of rigidity and convulsions which closely resemble epilepsy.
5. **Anti-social conduct,** such as unreasonable stubbornness, bullying, mischievousness, habitual tardiness, cruelty to smaller and weaker children or animals, lying, and stealing.
6. **Habitual wanderers,** runaways, and truants who seem to have no sense of responsibility regarding their attendance at school or at home, or any duties that have been assigned to them.
7. **Other mental habits,** such as habitual inattention, day-dreaming, the carrying out of fancies in make-believe—especially if carried to excess—extreme shyness, inactivity, "blues," morbidness, excitability, extreme timidity.
8. **Habitual headaches,** capricious appetites, such as eating leaves off trees, rosebuds, bark of trees, dirt, filth, and disgusting objects of any kind; abnormal timidity and cowardice; nail-biting; the injury of one's own person, such as biting oneself or rubbing certain spots with rough cloth until a sore results.

9. **Sexual abnormalities,** abnormal curiosity, extreme or public masturbation, exhibitionism.

## MENTAL HYGIENE COMMITTEE LIST OF BEHAVIOR SYMPTOMS[4]

*I. Physical Conditions.*—After the possibility of a physical disease has been eliminated by a thorough examination, we may find habit to be the cause of:

1. Disturbances of sleep: wakefulness, restlessness, night terrors, sleep walking.
2. Lack of normal appetite: insufficient, excessive, capricious, or perverted appetite.
3. Disturbance of eliminative functions: incontinence of urine or fæces, day or night; difficult urination, constipation; vomiting—persistent, or associated with correction or with some disagreeable duty.
4. Convulsive attacks: holding the breath in crying or in a tantrum, hysterical spells, over-activity.
5. Headaches: in the absence of a physical cause, headache may be a nervous habit or may be used, without conscious intention, to avoid some disagreeable experience.
6. Speech defects: baby talk (prolonged), stuttering, mumbling.
7. Miscellaneous nervous habits: habit motions of mouth or body, nail biting, thumb sucking.

*II. Mental Conditions or Personality Traits.*—Usually an exaggeration of something that is normal at the right time and in the right degree.

1. Withdrawing of attention and interest from real life, day-dreaming, excessive make-believe.
2. A "turning in" of the personality: shyness, self-centeredness, lack of self-confidence.
3. Fears: of particular objects or general timidity.
4. Unusual attachments or dislikes.
5. Premature or unusual sex manifestations: lack of modesty or excessive modesty; over-sensitiveness about sex or unusual interest in it; masturbation.
6. Habitual whining or crying.
7. Obstinacy or negativism.
8. Temper tantrums.
9. Over-self-assertion: tendency to domineer, demands for attention, pugnacity.

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[4] Prepared by the Massachusetts Department of Mental Diseases, Division of Mental Hygiene, 1924. Published by The National Committee for Mental Hygiene, Inc., New York. Distributed by the Massachusetts Society for Mental Hygiene, Inc., Boston, Mass.

*III. Asocial Conduct.*
1. Running away.
2. Lying.
3. Stealing.
4. Destructiveness.
5. Fire setting.
6. Sex assaults.
7. Cruelty.

## WOODWORTH'S PSYCHONEUROTIC INVENTORY[5]

During the World War it was inevitable that, under the draft regulations, many neurotic cases would be sent to the great camps. These cases were soon sifted out by the natural processes of selection and elimination. They could not learn or were uncontrollable, and developed into discipline cases. The old-time Army sergeant would simply throw them into the discard as "bone heads" or "no goods." But the psychologist brought to bear another point of view and a new technique which in many cases was beyond the comprehension of the old-time Army man.

One of the devices developed for making diagnoses of the behavior cases in the Army was *Woodworth's Psychoneurotic Inventory*. This was, of course, developed for men in the Army, and it is presented in its original form, because of its value in diagnosing certain behavior cases in men's colleges. Many of the items will not, of course, apply to the younger children, but the majority of them will be of value even in the elementary schools as suggesting lines of questioning.

Answer the questions by underlining "Yes" when you mean yes, and by underlining "No" when you mean no. Try to answer every question.

Name.......................................................Age............

Company or Organization...........................................................

Do you usually feel well and strong? YES NO
Do you usually sleep well? YES NO
Are you often frightened in the middle of the night? YES NO
Are you troubled with dreams about your work? YES NO
Do you have nightmare? YES NO
Do you have too many sexual dreams? YES NO
Do you ever walk in your sleep? YES NO
Do you have the sensation of falling when going to sleep? YES NO
Does your heart ever thump in your ears so that you cannot sleep? YES NO

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[5] WOODWORTH, R. S., Professor of Psychology, Columbia University.

Do ideas run through your head so that you cannot sleep? YES NO
Do you feel well rested in the morning? YES NO
Do your eyes often pain you? YES NO
Do things ever seem to swim or get misty before your eyes? YES NO
Do you often have the feeling of suffocating? YES NO
Do you have continual itchings in the face? YES NO
Are you bothered much by blushing? YES NO
Are you bothered by fluttering of the heart? YES NO
Do you feel tired most of the time? YES NO
Have you ever had fits of dizziness? YES NO
Do you have queer, unpleasant feelings in any part of the body? YES NO
Do you ever feel an awful pressure in or about the head? YES NO
Do you often have bad pains in any part of the body? YES NO
Where..........................................................................
Do you have a great many bad headaches? YES NO
Is your head apt to ache on one side? YES NO
Have you *ever* fainted away? YES NO
Have you *often* fainted away? YES NO
Have you ever been blind, half-blind, deaf, or dumb for a time? YES NO
Have you ever had an arm or leg paralyzed? YES NO
Have you ever lost your memory for a time? YES NO
Did you have a happy childhood? YES NO
Were you happy when 14 to 18 years old? YES NO
Were you considered a bad boy? YES NO
As a child did you like to play alone better than to play with other children? YES NO
Did the other children let you play with them? YES NO
Were you shy with other boys? YES NO
Did you ever run away from home? YES NO
Did you ever have a strong desire to run away from home? YES NO
Has your family always treated you right? YES NO
Did the teachers in school generally treat you right? YES NO
Have your employers generally treated you right? YES NO
Do you know of anybody who is trying to do you harm? YES NO
Do people find fault with you more than you deserve? YES NO
Do you make friends easily? YES NO
Did you ever make love to a girl? YES NO
Do you get used to new places quickly? YES NO
Do you find your way about easily? YES NO
Does liquor make you quarrelsome? YES NO
Do you think drinking has hurt you? YES NO
Do you think tobacco has hurt you? YES NO
Do you think you have hurt yourself by going too much with women? YES NO
Have you hurt yourself by masturbation (self-abuse)? YES NO
Did you ever think you had lost your manhood? YES NO
Have you ever had any great mental shock? YES NO
Have you ever seen a vision? YES NO
Did you ever have the habit of taking any form of "dope?" YES NO

Do you have trouble in walking in the dark? YES NO

Have you ever felt as if someone was hypnotizing you and making you act against your will? YES NO

Are you ever bothered by the feeling that people are reading your thoughts? YES NO

Do you ever have a queer feeling as if you were not your old self? YES NO

Are you ever bothered by a feeling that things are not real? YES NO

Are you troubled with the idea that people are watching you on the street? YES NO

Are you troubled with the fear of being crushed in a crowd? YES NO

Does it make you uneasy to cross a bridge over a river? YES NO

Does it make you uneasy to go into a tunnel or subway? YES NO

Does it make you uneasy to have to cross a wide street or open square? YES NO

Does it make you uneasy to sit in a small room with the door shut? YES NO

Do you usually know just what you want to do next? YES NO

Do you worry too much about little things? YES NO

Do you think you worry too much when you have an unfinished job on your hands? YES NO

Do you think you have too much trouble in making up your mind? YES NO

Can you do good work while people are looking on? YES NO

Do you get rattled easily? YES NO

Can you sit still without fidgeting? YES NO

Does your mind wander badly so that you lose track of what you are doing? YES NO

Does some particular useless thought keep coming into your mind to bother you? YES NO

Can you do the little chores of the day without worrying over them? YES NO

Do you feel you must do a thing over several times before you can drop it? YES NO

Are you afraid of responsibility? YES NO

Do you feel like jumping off when you are on a high place? YES NO

At night are you troubled with the idea that somebody is following you? YES NO

Do you find it difficult to pass urine in the presence of others? YES NO

Do you have a great fear of fire? YES NO

Do you ever feel a strong desire to go and set fire to something? YES NO

Do you ever feel a strong desire to steal things? YES NO

Did you ever have the habit of biting your finger nails? YES NO

Did you ever have the habit of stuttering? YES NO

Did you ever have the habit of twitching your face, neck, or shoulders? YES NO

Did you ever have the habit of wetting the bed? YES NO

Are you troubled with shyness? YES NO

Have you a good appetite? YES NO

Is it easy to make you laugh? YES NO

| | | |
|---|---|---|
| *Is it easy to get you angry?* | YES | NO |
| *Is it easy to get you cross or grouchy?* | YES | NO |
| Do you get tired of people quickly? | YES | NO |
| Do you get tired of amusements quickly? | YES | NO |
| Do you get tired of work quickly? | YES | NO |
| Do your interests change frequently? | YES | NO |
| Do your feelings keep changing from happy to sad and from sad to happy without any reason? | YES | NO |
| Do you feel sad or low-spirited most of the time? | YES | NO |
| Did you ever have a strong desire to commit suicide? | YES | NO |
| Did you ever have heart disease? | YES | NO |
| Did you ever have St. Vitus's dance? | YES | NO |
| Did you ever have convulsions? | YES | NO |
| Did you ever have anemia badly? | YES | NO |
| Did you ever have dyspepsia? | YES | NO |
| Did you ever have asthma or hay fever? | YES | NO |
| Did you ever have a nervous breakdown? | YES | NO |
| Have you ever been afraid of going insane? | YES | NO |
| Has any of your family been insane, epileptic, or feebleminded? | YES | NO |
| Has any of your family committed suicide? | YES | NO |
| Has any of your family had a drug habit? | YES | NO |
| Has any of your family been a drunkard? | YES | NO |
| Can you stand pain quietly? | YES | NO |
| Can you stand the sight of blood? | YES | NO |
| Can you stand disgusting smells? | YES | NO |
| Do you like out-door life? | YES | NO |

Remarks

Write here anything you would like to say on any of the questions

## THE U. S. VETERANS BUREAU CHART

The following Chart 41 prepared by L. M. Bartlett of the Rehabilitation Division and Dr. O. Everman, of the Medical Division of the U. S. Veterans Bureau will be found particularly helpful in making diagnosis and formulating vocational guidance prescriptions for abnormal behavior cases.

### CHART 41.—REHABILITATION OF NEUROPSYCHIATRIC VETERANS

| Disability | Characteristics | Extent of employability | Working conditions most conducive to stability |
|---|---|---|---|
| **Dementia Praecox**<br>**Schizophrenia**<br>**Paraphrenia** | Disorganization of personality; abnormalities of instincts and feelings; defects of interest; ideas of reference; impairment of judgment; delusions; disorders of perception; intrapsychic ataxia shown by odd, impulsive or negativistic conduct; disturbances of expression; shallowness or confusion of thought; comprehension distorted, insight lacking. | Very doubtful except in periods of remissions during early stages of disability. | Manual and routine involving no responsibility. Occupation should be selected in pre-war field of interest and lower in grade. |
| Manic-depressive<br>Manic Reaction<br>Depressive Reaction<br>Mixed Reaction | Recurring endogenic emotional disturbances. In the elated phase the morbid moods and accompanying psychomotor reactions show boisterous excitement; pressure of occupation; flight of ideas with no goal or guiding thought; feeling of well-being and exaggerated self-esteem. In the depressed phase there are psychomotor retardation and inhibition; feeling of mental and physical insufficiency; emotional depression with gloominess, anxiety and despair; poverty of ideas and slowness of thought. | Doubtful in any occupation except where history shows long intermissions between episodes. | Manual and routine involving little responsibility. Avoid occupations requiring good judgment or where safety of others is involved. |
| Psychoneurosis<br>Neurasthenia<br>Psychasthenia<br>Hysteria | In essence, a psychoneurosis is a "way out" of some distressing difficulty resulting from long continued errors of adjustment. The reaction is offered as an excuse for the gap between ambition and achievement, and is purposeful or defensive in nature. The syndrome usually shows mental and motor fatiguability, hypochondriasis, feeling of inadequacy for any work, irritability, varying degress of depression; morbid doubts, phobias, obsessions, explosive behavior from insignificant annoyances, lability of mood, fallacies of memory, anesthesias, parasthesias and episodic attacks. | Fair employability if stress is removed. Employability more difficult if disability is super-imposed upon low intelligence. | Occupations requiring physical activity as salesmanship, carpentry and plumbing. Avoid occupations requiring stress and sustained effort. Occupation hould be agreeable to trainee. |

CHART 41.—(*Continued*)

| Disability | Characteristics | Extent of employability | Working conditions most conducive to stability |
|---|---|---|---|
| Essential Epilepsy | A constitutional psycho-biological disorder manifested by convulsive outbursts. After the onset of the seizures, the disorder persists throughout life and shows three prominent clinical features: (1) Epileptic character shown by supersensitiveness, stubbornness, peevishness, fault-finding, quarrelsomeness, (2) seizures including equivalents indicated by loss of consciousness, violent falling which frequently results in injury, (3) deterioration manifested by progressive impairment of memory, slowness of association and difficulty of thinking with defective reasoning. | Opportunities very limited. Not desired by employers. | Hazardous occupations as machine trades, building trades, and chauffering to be avoided. Possible trades: cabinet making, surveying, watch making, tailoring, auto painting, shoe cobbling. Farm laboring or operation of small farm projects desirable. |
| Constitutional Psychopathy | Superficially normal but lacking continuity of purpose and capacity for continuous expenditure of effort in any one direction; abnormal make-up expressed mainly in the character and intensity of the emotional and volitional reaction; defect lies in the moral rather than in the intellectual field; frequently in conflict with the law. This group includes the ill-balanced, eccentric cranks; the egocentric braggarts; pathological liars; swindlers and malingerers; nomadic beggars and kleptomaniacs; alcoholic vagrants, drug addicts, sex perverts, and the misanthropic degenerates with criminal traits. | Doubtless because of inability to stick to one thing. | Occupations to be avoided requiring responsibility and goo personality. Selection confined chiefly to labor jobs. Avoid occupations requiring high moral standards. |
| Endocrinopathy | Disturbances due to hyper-, hypo-, or dys-function of various endocrine glands usually producing a fatigue syndrome with anorexia, indigestion, emaciation, sallow skin with wrinkling and pigmentation, vasomotor disorders, capricious moods especially irritability, apathetic depression, insomnia, headaches, etc. | Fair, depending upon temperamental reaction to his environment. | Occupations involving mental stress or prolonged physical strain to be avoided. |

## INDIVIDUAL CASES[6]

Just as soon as the work of the guidance adviser becomes known throughout the school and community, a succession of individual problem behavior cases will be brought to the office for diagnosis and treatment. The following were actual cases found in the public schools and are presented not particularly as type cases, but because they presented themselves in the regular routine of school work, and also because they present different methods of analysis and "write up."

### CASE I[7]

I.... is a large girl, very much *over-weight*, who came up to me on the complaint that she was a "pest," *talking constantly* with the other girls, interrupting the teacher to *ask silly and useless questions*, making little headway with her work, acting in a *generally childish* and troublesome manner, and *usually late* in the morning. She had *repeated three school grades*, and was in the 6B with apparently no prospect of further advancement when she came to the Trade School. All school work had been hard, she said, but she had liked history and geography, and was good in them. I asked her what she had learned in history, and after a time she remembered that there had been a war at some time or other, which she guessed was in South America, and there had been slavery in it. But in school—she said brightening—they had learned all the dates of the Presidents. As to geography, all I could elicit was that they had "learned about seaports and vegetables and fruits and different races." When I asked her further about her school career she told me *with a good deal of emotion* that once her teacher had made her ashamed before everybody. The teacher had criticized her hair, which is very heavy and curly, and told her to wear barrets to hold it down. I.... insisted that she had only forgotten to wear them the next day, but the teacher would not accept this answer, and tied her hair back with cord. This was an unforgiveable humiliation.

Together we went over her work at the Trade School, taking it up under three A's—Attendance, Appearance, and Attitude. We found that she was late because she went to *bed at nearly twelve* every night, accordingly getting up not only irregularly, but usually too late to catch the regular train. "I can't run like the other girls," she said, a fact that undoubtedly did enter into the situation. Together, we made out a little program:

| | |
|---|---|
| Go to bed at | 10:00 |
| Get up at | 7:30 |
| Leave the house | 8:10 |

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[6] See also, "Three Problem Children," *Publication*, No. 2, New York Joint Committee on Methods of Preventing Delinquency, New York, 1924.

[7] For the description of these three cases the author has to thank Miss Gertrude M. Barnes, a student in one of his classes.

Under Appearance, which considered neatness and cleanliness, I.... came out well. Under Attitude, she suggested three items: trying to improve your work, not talking, and not answering back. The first two of these she decided needed improvement.

As I.... talked with me, she showed not only a childish and very immature attitude, and lack in insight and judgment of herself, but also a number of *childish mannerisms,* such as *pulling at her apron strings* and *casting down her eyes* whenever she felt a reproof might be approaching. Because of *prolonged immaturity* and her *highly over-weight condition,* I thought she *might be an endocrine case,* and that it would be wise for her to visit a clinic. A week later I talked this question over with her and, although she was reluctant to see a doctor, still she admitted that she would like to be thinner like the other girls, and agreed to consult her mother about the advisability of visiting a clinic. The vacation came at this time, so I did not see her again for two weeks. In the meantime her father had taken her to a clinic, she had received various tests, and considerable treatment had been prescribed. When I saw her, she had been keeping regular hours, and looked definitely better. She told me with great pleasure that she had already lost 3 pounds, and that she was carrying out the doctor's orders to walk 40 blocks a day, and take some medicine before and after meals, just as he wished her to do. Since then she has continued to lose weight steadily, and her complexion is clearer. Although she complains that the treatments make her feel "weak" and tired, she is pleased with the results. Her work seems to be improving, and the last time I saw her she said that the teacher had come up and told her one day that her work was better, and that she had been very good lately about not talking.

### Case II

M.... is one of eight Italian children. *Her I.Q.* is 67.5, thus placing her in the feebleminded group, and she is *small and very evidently undernourished.* The *older sister* had been on Blackwell's Island (prison) all her life, until recently when she was moved to Letchworth Village (reformatory). Of course, this fact did not prevent her parents, or suggest to the authorities that they help prevent, admitting into the world seven more children (the youngest now is several months old) of such heredity.

M.... was sent to me because *she was "flighty," did not attend to her work, lied easily,* and was under the graver suspicion, unsubstantiated by direct proof, that she had *taken small change* upon occasion. When I asked her about her health, she told me that she often had *headaches* and *stomachaches.* She had them usually when she had come to school without breakfast. In fact, she usually did not have any breakfast, and the teacher had already told her that she ought to have cereal in the morning, "but it's too expensive, and I don't have time." When she had had no breakfast, she said she was more *apt to worry* about things at home. She said that in the morning she had to look after the younger children, get breakfast, and wash the dishes before coming to school. *Her mother has had sore fingers* for the last few months, which the doctor says is *due to her blood,* and that she must not put them in water. Therefore, M.... must do all the work. The only one who could help her at all is W...., aged 11, but she will not help much. M.... said that she went to *bed about* 11 every night because she cleaned the rooms every day, and that meant she must stay up late, and get up at six. "Everyone who comes says I keep the house clean," she said. She insisted that she could not go to bed earlier because of the work, but agreed to try to have a piece of bread and a little milk for breakfast in the morning. I finally asked if I might come to see her mother, and the next week she told me that her mother would be glad to see me.

I found that the family lived on the top floor of an apartment on B.... Street, where the halls were dark and filthy, but their own rooms were, as M.... had said, very clean and neat. (M.... had not known what day I was coming.) The mother said that M.... *worked every evening until nine or ten,* and had a good deal of work in the morning before leaving for school, but that there was no one else to help. Her own fingers were bandaged, and she repeated the doctor's orders to show that she herself could do no work. She said she knew that M.... was over-worked, and ought to have breakfast, but what could she do with seven children at home, and herself unable to work?

The next time that I was at the school, M.... was sent to me in disgrace *for having lied when the evidence was all against her.* She *told me in turn various versions of the incident,* but finally admitted that the teacher's story was the correct one. The incident was trivial, with no great consequences attached either way. It suggested *the desire to lie,* apart from the pressure of external conditions.

As yet I have proceeded no further, nor been able to improve matters with M..... In that family situation there seems nothing to be done except sacrifice the girl to the seven others more helpless children and parents. With so much work at home, however, and insufficient sleep, it seems to me impossible to expect attentive and accurate work from her at school, and not very unnatural that she should take to such *unconscious expressions of revolt as lying and thieving.*

In passing, it may be interesting to note that one Italian woman, who directed me to the top floor, told me that she had been born and lived all her life in New York, but had never been sent to school, and could neither read nor write.

### CASE III

M.... was interesting as a "case." The teacher said she had *no ability at all in handwork,* was so *self-distrustful* that she *asked ten questions to every other one in the room,* was *nervous, sensitive,* and seemed to *crave affection.* When she came to me, she told me of "*spells*" that she often has at night, but of which she knows nothing until she wakes up feeling ill in the morning. Her sister tells her that she *often falls off the bed* at such times. She has had these "spells" since she was three years old, a date which she connects with her father's death. She showed a number of *nervous symptoms,* and told me of others, such as being troubled by *losing her breath* on any small excitement, or becoming *extremely angry* now and then (her *face flushed and she trembled* as she told me). She said that there was seldom any real reason for becoming so angry. When I asked her about her school work in the grades, she said that it was very hard except reading, which meant everything to her, and that she preferred poetry to stories. She *had a collection of poems* that she read till late at night, she said and the next week brought them to show me. We went over several poems. They were of a simple, direct nature, presenting no great difficulties in thought, but she comprehended only a little here and there. Evidently it was *the rhythm that appealed* most to her, and an apparently *rather vague elevation of feeling.* She liked one poem in particular, which ended with the sentiment Abraham Lincoln had to fight his way against difficulties; we must too. That seemed very fine to her.

I was anxious to find out whether M.... is suffering from epilepsy. *The spells at night easily suggest some form of epilepsy,* which occasionally is limited to night attacks. If these are true epileptic attacks, and if they began as early as she says, her future is not bright. Then, too, the interest in poetry may correspond to the frequent *absorption in religion that one meets among epileptics.* There is much in common between the two interests. M.... should, of course, be under a physician's care, and I had planned to take her to the Neurological Institute, when she suddenly decided to leave for California where her mother is sick.

## CASES FROM AN OPPORTUNITY CLASS

The following three cases were selected from a study of an entire "ungraded" or "opportunity" class.[8]

*The following "measures" were obtained:*

*Chronological Age.*—Determined as of January 1, 1924, using "Dates of Birth" according to permanent record cards and a table as suggested by Strayer and Engelhardt.

*Height.*—Carefully taken with the aid of the school nurse. Standards or norms were taken from studies by Dr. Franz Boas, recorded and discussed in Terman's *The Hygiene of the School Child,* pages 22 ff.

*Weight.*—Determined much the same as height.

*Grade Attained.*—From permanent record cards. *The records would lead one to believe that frequently pupils were promoted though they had "Failed."*

*Mental Age.*—Otis Group Intelligence Test given in September, 1923, plus four months, bringing up to January, 1924.

*Handwriting.*—Comparisons made with "The Thorndike Scale for Handwriting of Children." Four judges were asked to rate the papers and the final score was the average of the four judgments.

*Language Completion.*—Trabue Language Scale C.

*Composition.*—Comparisons made with "Nassau County Supplement to the Hillegas Scale for Measuring the Quality of English Composition." Final score was the average of the judgments of three competent judges.

*Arithmetic Fundamentals.*—Wood-McCall Mixed Fundamentals, Form II.

*Reading Comprehension.*—Thorndike-McCall Reading Scale, Form IV.

*Industrial Arts.*—Partrick Industrial Arts Tests for Grades 7 to 9, Diversified Tests. This is a new test in the experimental stage and, as was expected, was found to be "over the heads" of many of the group.

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[8] For the write-up of these cases the author has to thank R. W. Dimmick, a student in one of his classes.

### CASE IV

Date January 8, 1924.

Pupil's Name M., T.

Progress in Grades:

2 yrs. in third

2 yrs. in fourth

2 yrs. in fifth

Conditioned to sixth

Birthplace of Parents:

Father Czechoslovakia

Mother Czechoslovakia

Father's Occupation Cabinet-Maker

Pupil's I.Q. (Otis Group) 63

Pupil's plans for the future Wishes to become an electrician as he is much interested in radio and electric door-bells. Age, 174 months.

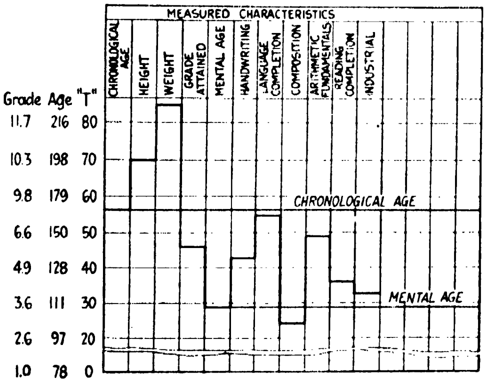
T. . . . is a Moron. He *is a hard, conscientious worker* but he accomplishes little. He likes "rifmetic" and will work at it for hours, disliking to be disturbed.

He is *very courteous* to his teachers. He would really like to "get along."

He has a *big strong, healthy body*; *much overweight* and because of his strong physique and *his persistance* he may become useful as a helper, or some similar work where he will be closely supervised.

CHART 42

Pupil's Name M., T. Date January 8, 1924.



### CASE V

Date January 8, 1924.

Pupil's Name P., H.

Progress in Grades:

2 yrs. n first

2 yrs in second

Conditioned to third

Conditioned to fourth

Birthplace of Parents:

Father America

Mother America

Father's Occupation Draughtsman in architect's office

Pupil's I.Q. (Otis Group) 89

Pupil's plans for the future Wishes to become an architect. Age, 153 months.

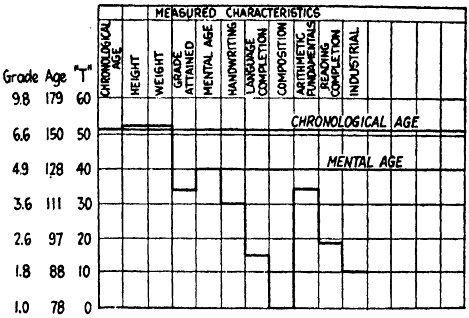
Older brothers were fair students and finished high school, younger brother has much difficulty in 1st and 2nd grades.

H..... is "Dull" and *"loafs" most of the time.* He could do better in some things. *He is a poor reader.* He should be in a class where he would have to get busy. He should show a real improvement.

He is "sour" by spells and pouts when scolded and is a good deal of a nuisance at home.

### Chart 43

Pupil's Name P., H.  Date January 8, 1924.



### Case VI

Pupil's Name J., I.

Birthplace of Parents:

Father America

Mother America

Father's Occupation Printer in bindery

Date January 8, 1924.

Progress in Grades:

1 yr. in third

1 yr. in fourth

2 yrs. in fifth

Failed in sixth

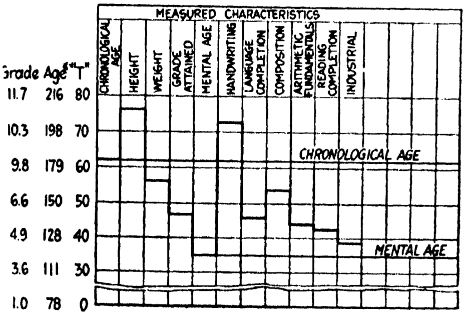
Pupil's I.Q. (Otis Group) 65

Pupil's plans for the future Wishes to become a typist, stenographer, secretary. Age, 183 months.

I... is a "Moron." She *is a sincere, struggling creature* but does not progress. She needs the advice of the right sort of woman. She is too slow to become a typist, it would seem. She should be taught plain sewing for she will probably soon become a house-keeper and possibly a mother, much as we dislike to think of such a possibility. Is ambitious in a vain sort of fashion. Is attractive and somewhat of a flirt.

### Chart 44

Pupil's Name J., I.  Date January 8, 1924.



## THE WOOLLEY AND FERRIS CASES[9]

In a report of a study of 16 young school failures, one of which was classed as "a psychopathic child," we find in the very interesting case "write-up" the following significant items:

1. **General Intelligence.**—The range of the I.Q's (a total of 51 for the 16 cases) was from 69 to 105, the median I.Q. being 85, more than one-half ranging between 80 to 90.

2. **Abilities and Disabilities.**—High language ability, makes neat copy from script but with no understanding. Strong verbal memory, strong visual memory. Difficulty with numbers. No manual ability.

3. **Physique.**—Weak and listless, colorless skin, voice thin, shrill. Anemia. Tonsils, bad, enlarged, inflamed. Adenoids. Teeth bad, irregular, notched. Enlarged glands. Small stature, under-sized. Low vitality. Pale eyes. Long outstanding ears. Peculiar head contour. Paralyzed palate. Abscesses.

4. **Behavior.**—Emotionally unstable; bed wetting; inability to sit still; nervousness; a little demon, uncontrollable, unruly, stubborn, undue sex interest, aggressive conceit, unchildlike conceit, lack of muscular coordination, always late. Cruelty, run-away, habit of frowning, aphasia, swearing, imperfect speech, silly behavior, stealing, stammering, unreliable, wild tales, sex-precocious, vulgar writing, foul language, dramatic instinct, hard expression, secretiveness, crying spells, foolish smile, abnormal fears, infantile behavior, no reserves, inability to concentrate, indifferent to everything, troublemaker, over-anxious, staring into space.

Considering that no I.Q. was less than 69, with an average of 85, coupled with the long and significant list of behavior symptoms, there can be little question but that more than one of the cases should be classed as psychopathic.

Much more might be written upon this very interesting phase of guidance, but there is always the danger of over-emphasis. For those who wish to develop further this phase of the work the following suggestive bibliography is presented:

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[9] Woolley, H. and Ferris, E., "Diagnosis and Treatment of Young School Failures, *Bull.*, No. 1, 1923, Bureau of Education, Washington, D. C., pp. 19–101.

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## CHAPTER XXI

# PHYSICAL STIGMATA AS AN INDEX OF DISABILITY

The guidance adviser, when making a diagnosis of an individual or making an analysis of a group, must be keenly observant for any of the numerous signs and symptoms which will assist in making a correct diagnosis and analysis. One of the most helpful of these groups of signs and symptoms is the group of physical stigmata—those signs, marks, and blemishes of the body which indicate possible weaknesses, taints, or disabilities.

There is no conclusive evidence to prove that physical stigmata as presented in any individual case are due entirely to defective germ plasm or due to other factors. Neither are we sure in all cases whether or not these stigmata are an effect or a cause of mental deficiencies. Any one of these defects may appear in persons who are otherwise perfectly normal, but we do know that they are much more numerous in the mentally defective group than in the normal group. In the examination of 200 individuals classed as low-grade morons, stigmata were found in all but 19, and in many cases several of the stigmata were found in the same individuals.

It should be recognized at the outset that, taken by themselves, *physical stigmata should never be accepted as prima facie evidence of mental deficiency.* There is no question, however, but that they are of value to the guidance adviser and the mental diagnostician in making a superficial examination, and in segregating individuals possessing stigmata for further examination, if the other factors in the situation seem to justify such segregation and examination.

## PHYSICAL STIGMATA CLASSIFIED

*Abnormalities of the skeleton* are very frequent in cases of mental defectiveness. The head, palate, jaws, and teeth are the parts most frequently affected. Abnormalities of the head are probably the most common. *Approximately 50 per cent of mental* *defectives have a cranium that is abnormal in shape and size, is asymmetrical, or has noticeable ridges, hollows, or "bumps."*

## I. THE HEAD

The first of the so-called stigmata of degeneracy is the undersized, over-sized, or misshaped cranium. This is an important diagnostic mark of mental deficiency, particularly among children.

### *Cephalic Index*[1]

The so-called "Cephalic Index" is the standard of measure of the size and proportion of the cranium. This index is the proportion of the greatest breadth to the greatest length, the formula being:

$$\frac{\text{Maximum Breadth} \times 100}{\text{Maximum Length}} = \text{Cephalic Index}$$

*In civilized races, with normal individuals, the average cranium length is* 7 *inches, the average cranium breadth is* 5½ *inches, the average cephalic index being about* 79.

The normal circumference is:

| | |
|---|---|
| Age 1 | 12 inches |
| Age 5 | 20 inches |
| Age 10 | 21 inches |
| Adult | 22 inches |

Other indices used for more detailed classification are:

1. The Vertical Index.
2. The Total Facial Index.
3. The Superior Facial Index.
4. The Gnathic Index.
5. The Nasal Index.
6. The Orbital Index.
7. The Dental Index.
8. The Palato-maxillary Index.

### GENERAL CRANIAL SHAPES

The general cranial shapes are classified as follows:

1. **Brachycephalic.**—Broad and short; Cephalic Index over 80; found in Malays, Burmese, American Indians.

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[1] See TREDGOLD, *Mental Deficiency*, pp. 7–75, 202–223. BUCHANAN, *Manual of Anatomy*, pp. 156–159. CUNNINGHAM, *Textbook of Anatomy*, pp. 171–174, 285–287. SHUTTLEWORTH and POTTS, *Mentally Deficient Children*, pp. 51–119.

2. **Mesatocephalic.**—Intermediate size and shape; Cephalic Index 75 to 80; found in Europeans, Chinese, Polynesians.

3. **Dolichocephalic.**—Long and narrow; Cephalic Index below 75; found in Zulus, Eskimos, Fijians, Australian Kaffirs.

*On the basis of capacity* craniums are classified as follows:

1. **Microcephalic.**—Capacity below 1,350 cubic centimeters; Australian Bushmen, Tasmanians.

2. **Mesocephalic.**—Capacity from 1,350 to 1,450 cubic centimeters. American Indians, Chinese, negroes.

3. **Megocephalic.**—Capacity over 145 cubic centimeters; Europeans, Japanese.

### DEFORMITIES IN SHAPE

*On the basis of deformities* in shape, craniums are classified as follows:

1. **Scaphocephalus.**—Boat-like in shape; low and somewhat pointed front and back.

2. **Acrocephalus.**—Pointed head, usually short length and breadth, coming to a decided peak at the top.

3. **Plagiocephalus.**—Oblique in form, sometimes found in combination with other deformities.

4. **Trigonocephalus.**—Triangular in form.

5. **Cretin.**—Flat on top, long and narrow, broad behind and asymmetrical.

### OTHER CRANIAL ABNORMALITIES

Certain special abnormalities of shape and size have proved to be fairly true indices of mental deficiencies. The most significant types with their major indications follow:

1. **Microcephalus.** *About* 12 *Per Cent of All Cases of Feeblemindedness Fall in This Group.*—The cranium is usually thicker than the normal, with the sutures firmly and permanently united. This fact has in the past lead to the performing of operations to open the sutures, the idea being to give the brain more room to develop. No positive improvements in intelligence followed these operations.

The capacity of the microcephalic cranium is below 1,350 centimeters, the circumference being considerably below the normal for that age.

The shape of the microcephalic cranium is usually pointed (Acrocephalic) with a narrow, rapidly receding forehead and a *flat occipital. The palate is high and narrow, the scalp abnormally thick, sometimes folded, and generally with a small stature.* The extreme of microcephalus indicates a low type of idiocy.

**2. Hydrocephalus.**—This is the abnormally large head with broad forehead and small features. The face is always flat and often concave in outline. In young children Hydrocephalus is an almost certain indication of feeblemindedness.

In the condition there is excess of cerebrospinal fluid with or without pressure. If the excess fluid is within the ventricles, the cortex of the brain is pressed against the skull and circulation is stopped, with consequent atrophy of brain matter, often accompanied by brain tumors, tuberculosis, and inflammation of the brain. Sometimes the fluid is external to the brain, and in this case the results are not so serious. If the case lives to adult age, this condition is sometimes accompanied by remarkable intelligence.

**3. Mongol—Kalmuc-Tartar.**—Approximately 5 per cent of mental defectives are of this type. Adult Mongols are usually about 4 to 7 mental age. *Their active, lively, good-natured disposition often deceives the untrained observer in regard to their mental deficiency.*

The cranium is short and oval (Brachycephalic) with both diameters equal. Mongols (so-called because of their slant eyes) have coarse skin, chubby cheeks, gruff voice, slow pulse, and are usually dwarfish. The two distinguishing features are the slant eyes and the transverse fissured tongue. Most "Mongols" die early, usually before 14 years of age.

**4. Oxycephalic—Tower Skull.**—In this type we find the cranium decidedly dome-shaped with the vertical diameter large, the other diameters small. The dome is separated from the temples by furrows, the supraorbital ridges being absent. This type of abnormality is due to premature synoastous of the coronal and frontal sutures.

Oxycephaly is usually accompanied by large, prominent eyes and ocular defects of various kinds.

**5. Scaphocephalic.**—This is the reverse of oxycephalic, the anterior-posterior diameter being large.

**6. Hypertropic Cranium.**—This is a square-shaped cranium with fulness in the temporal region, the superciliary ridges being quite noticeable. The case generally suffers from severe headaches and fits.

**7. Cretin Cranium.**—In this type the cranium is flat on top, long and narrow (Dolichocephalic), Cephalic index below 75. Usually broad behind and nearly always asymmetrical.

The cretin cranium is usually accompanied by a wrinkled forehead, a waxy complexion, and a dry, scaly skin. All cretins are feebleminded.

### II. SIZE AND WEIGHT OF BODY

The second of the stigmata is any *abnormality in regard to size or weight.* The "Cretins" are much under-size and weight and are always defective in mentality. The other extreme is "Giantosis," where the individual is much larger than ordinary but of good proportion. "Elephantosis" occurs where the individual is gross in shape and weight and is out of proportion. In these cases we have respectively the dwarf, the circus giant, and the sideshow fat woman.

The above are the extremes and are not common, but, in a general way, if the individual is under-size or very much over-size this condition can be accepted as one of the stigmata and causes for further investigation.

Abnormalities of stature, either giantism or dwarfism, are almost a sure indication of mental defectiveness. Dr. Goddard in the *Journal of Nervous and Mental Diseases* (April, 1912) finds that the more extreme the giantism or dwarfism the more marked is the mental defect.

### III. THE FACE

The third stigmata is any peculiarities of shape and size of the nose, lips, and jaw. The protruding jaw, the strongly receding jaw, any asymmetry of either upper or lower jaw, protruding teeth, very irregular teeth, inharmonious development or any decided peculiarity of number, form, or size of the teeth. Anomalies of the teeth are very common among defectives—in fact, *a good set of teeth is quite rare among the mentally defective.* They usually appear late, are irregular, poorly formed, and decay early.

### IV. THE PALATE

The palate is often deformed in cases of mental deficiency. Clouston in *Neuroses of Development* (1891) states that deformed palates are present in 19 per cent of the ordinary population, 33 per cent of the insane, 55 per cent of criminals, 61 per cent of idiots. Peterson and Church in *Nervous and Mental Diseases* (1904) found *deformities of the palate in 82 per cent of mental defectives, in 76 per cent of epileptics, and in 80 per cent of the insane.*

The deformities of the palate are: (1) the saddle or keel-shaped palate, (2) the V-shaped palate, (3) the cleft palate. The saddle-shaped palate is the more common and the cleft palate the more uncommon. In addition the cleft palate is not so certain an indication of mental defectiveness. The same may also be said of the hare lip which frequently accompanies the cleft palate.

### V. THE NOSE

The very broad flat nose, the very large prominent nose, is also a stigmata of degeneracy. *Very seldom is a well-formed nose found among defectives of low grade.*

### VI. THE TONGUE

The transverse fissured tongue, slavering or driveling from the mouth, and chronic nasal catarrh are all points to be observed, as they are closely correlated with other stigmata.

### VII. THE EAR

Abnormalities of the shape of the ear are generally thought of as indicating certain mental tendencies, criminal or otherwise, but *this is not generally true*, as many normal persons have various abnormalities of the ear, although they are more common among defectives than among normals.

### VIII. THE EYE

Abnormalities of the eye are very common among defectives. The abnormalities cover so wide a range that almost any decided peculiarity of the eye, either in the pupil, lids, or form, may be accepted as of value in a diagnosis of mental defectiveness. Quick sidewise movements of the eyes when an attempt is made to focus in a new direction, the familiar cross-eyes; the so-called "Mongolian" slant eyes, any difficulty in controlling the actions of the eyes are examples.

### IX. FINGERS AND TOES

Deformities of the fingers and toes, such as polydactylism—hands and feet with more than the regular number of toes;

syndactylism—where the fingers or toes are joined together, sometimes in the form of the so-called "lobster hand," so designated because of its resemblance to the claw of a lobster; talipes—in which the foot is turned outward and the person walks upon the ankle—are illustrations.

### X. HAIR

The tenth of the stigmata is the presence of hair on unusual parts of the body, or its absence from parts where it is customarily present.

### XI. FACIAL EXPRESSION

The eleventh is defective facial expression: the lack-luster eyes, the open mouth, the slack jaw.

Other stigmata are the wrinkled forehead, which gives an aged, worried look; the loose-folded scalp frequently noticed in cretins and microcephalitics; the poor posture—leaning forward with bowed arms.

### REMEDIAL PHYSICAL DEFECTS[2]

There is a certain relationship between defectiveness, the stigmata of degeneracy, and certain remedial physical defects associated with mental deficiency. These remedial physical defects are:

**1. Defective Vision.**—In this we must keep in mind persons who are far-sighted as well as those who are near-sighted. The Snellen test card is standard for testing visual acuity. Habitual headache in children is generally a strong indication of eye strain caused by defective vision.

**2. Defective Hearing.**—There is no thoroughly standardized test for defective hearing, the best test being the Kirkpatrick whisper test. Defective speech, apparent dullness, inattention, are frequently consequences of defective hearing.

**3. Diseased or Enlarged Tonsils.**—About 12 per cent of all school children have diseased tonsils and 18 per cent of subnormals are so affected. Diseased tonsils, supertonsils, and diseased turbinates fall under this heading. The function of tonsils is to assist in destroying disease germs, but whenever they become diseased, enlarged, or inflamed, they spread the inflammation, resulting in rheumatism, heart disease, chorea, deafness, and particularly do they lower the vitality, increase the liability to disease, making it difficult for the individual to function mentally.

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[2] See CLARK, T., and BELL, E., "Correcting Physical Defects in School Children," *Reprint*, No. 742, U. S. Public Health Service, Washington, D. C., 1922.

4. **Adenoids.**—Adenoids were considered at one time to be a cause of mental defectiveness, but now they are merely considered to be a concomitant to mental defectiveness. Years ago it was believed if a child had adenoids and was below the level of intelligence for his age and grade, that the removal of the adenoids would increase his intelligence. This is now considered as not proved. The adenoids do shut off the breathing and cause the individual to breathe through the mouth, causing deformed thorax, nasal catarrh, deformity of hard palate, and disturbed sleep.

5. **Turbinates,** nasal catarrh, chronic colds, all of which affect the breathing by obstructing the breathing passages.

6. **Poor Teeth.**—Under this heading we find diseased teeth, suffering of pain from aching teeth, missing and misplaced teeth, resulting in poor mastication of food, indigestion, and malnutrition. Along with this we get toxemia, auto-intoxication, pus poisoning, intestinal catarrh, all resulting in malnutrition, nervous irritability, liability to infection, etc.

7. **Malnutrition.**—Indicated by the distended abdomen, dry, feathery hair, sallow skin, blue lips.

8. **The Ductless Glands.**[3]—These are the thyroid, parathyroid pituitary, pineal, adrenal, thymus, and the pancreas. The secretions of these glands discharge directly into the blood and are necessary to the general well-being, and especially important to mental well-being. The remedy is to give extracts of these various glands to the case.

If the examiner will keep these various stigmata, symptoms, and defects in mind, they will often be of value in making superficial examinations and selections of individuals for more detailed examination and treatment.

## ABNORMALITIES OF PHYSICAL FUNCTIONING

*In general, the bodily functions of the mentally defective are retarded and feeble.* Inquiries concerning the infancy of the defective will generally bring out the fact that standing, walking, talking, and the appearance of the teeth have all been materially delayed.

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[3] See also p. 383.

*The bodily functions* of circulation, assimilation and digestion, excretion, along with reactions of all kinds, are performed feebly and inefficiently. Most young defectives are afflicted with enuresis (bed wetting) and diuresis (clothes wetting). The vitality is low, accompanied by sores, colds, catarrh, running nose and ears, increased susceptibility to such diseases as tuberculosis, smallpox, scarlet fever, whooping cough, rickets, diphtheria, croup, and other similar diseases.

*Muscular, motor, and nervous control are generally abnormal at both ends of the scale.* Some defectives are very dull, stupid and stolid. Others are very active, continually in motion, find it impossible to stand or sit still for even the shortest space of time, are easily distracted, and cannot remain at any task for any length of time. Some rare cases have remarkable ability with tools and have muscular and motor coordination of a high order, but the majority blunder and stumble, drop or break almost everything they handle, and are unable to perform even the slightest tasks that call for motor or muscular control. In some cases it is possible to train this type of defective in short-cycle, repetitive operations, such as weaving and brush making, where the motions become automatic after much practice. Very seldom do mental defectives learn to use tools requiring skill, judgment, and nicety of perceptions, the rare exceptions being the so-called "idiot-savants."

Often the process of speaking is accompanied by diffusion of motor energy, such as contortion and twitching of the face and body, wrinkling of the forehead, giggling, stuttering, lisping, or mechanical repetition. These occur about five times as frequently in mental defectives as in normal children. In the worse cases the speech is almost unintelligible, except to one who is accustomed to it. *One outstanding characteristic of the mental defective is inability to pronounce consonants.*

Ability to pay attention and to develop constructive imagination is almost always lacking in mental defectives, although many of them spend most of their time in daydreaming, which is probably set up as a defense mechanism to enable them to escape from the discomforts resulting from their inability to live normal lives in a normal situation. Most of them are also lacking in the aesthetic sense.

Cruelty to animals and younger children is a marked characteristic of certain forms of mental defectiveness. This is often accompanied by lying and the invention of wild stories of things that have happened to them and that they have seen. Such persons often exhibit considerable ingenuity and cunning in inventing explanations when they are caught lying or stealing.

No one or two of these abnormalities of physical functions are in themselves sufficient to warrant one in making a diagnosis of mental deficiency, but the fact that they are so common among defectives makes them valuable as a rough method of making a tentative diagnosis for the purpose of segregation, so that more detailed examination may be made.

### DR. NORSWORTHY'S LIST[4]

Dr. Norsworthy made a list of the characteristics of 157 mentally deficient children who had been studied intensively. The following characteristics appear once or more on her list:

**Physique.**—Over-grown, too stout, shrunken, lanky, large head, small head, misshapen head, asymmetrical head, misshapen ears, lame, paralyzed, epileptic, tonsils, adenoids, dribble at mouth.

**Expression.**—Vicious, wandering, stupid, vacant, shifty, queer, sleepy, heavy, old face, repulsive, wizened face, puffy face, unsteady eyes, glassy eyes.

**Behavior.**—Nervous, flighty, irritable, timid, clumsy, stupid, afraid, incoherent talk, talks poorly, talks continually, uses single syllables, giggles, mischievous, uneasy, little attention, syllables, giggles, mischievous, uneasy, little attention, walks clumsily, walks peculiarly, drags feet, waddle walk, mouth open, tires easily, left-handed, peculiar motions when talking, aggressive, cries readily.

It will be noted from the above list that defectives present characteristics *that deviate both ways* from the normal. They are either too stout or shrunken, talk incessantly or not at all, are very timid or aggressive, have a very large head or a very small head. They may avoid other people or are unhappy when left alone. One may be always over-elated, another always depressed, and another swinging from over-elation to depression in rapid alternation.

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[4] NORSWORTHY, N., "The Psychology of Mentally Deficient Children," *Archives of Psychology*, vol. xv, No. 2, Columbia University, New York, 1906, p. 109, ff.

## THE RELATIONSHIP BETWEEN PHYSICAL CHARACTERISTICS AND MENTAL DEFICIENCY

In developing the relationships between the physical characteristics and mental deficiency, we must keep in mind that in some cases the *physical characteristics act as a direct cause* of mental deficiency. This would be the case in cerebrospinal meningitis, or a blow upon the head. In other cases, the *physical characteristic is an indirect cause* of mental deficiency, such as cretinism, or of diseased, non-functioning, or over-active ductless glands, which normally discharge certain extracts directly into the blood and which have a powerful influence on the mentality of any individual. Some of these glands are the thyroid; the parathyroid; the pituitary, and pineal located at the base of the brain; the adrenal located over the kidneys; the thymus, in the upper thorax, which degenerates soon after adolescence; and the pancreas, an abdominal gland. Dr. Peters, of Vineland, New Jersey, reported that 74 *per cent of mental defectives examined by him showed deficiency in the functioning of the thyroid glands*, 40 *per cent showed deficiency in the functioning of the pituitary gland.* It is now generally accepted that deficiency of gland extract in the blood plays an important part in mental deficiency. We have many notable cases of improvement of mental defectives following the introduction of gland extracts into the blood.

In some cases the *physical trait acts both as a direct and an indirect cause* of mental deficiency. This is the case in infectious diseases, such as scarlet fever, syphilis, etc. Sometimes the trait is merely a concomitant, and has no real connection with the mental deficiency, merely acting as a symptom or stigmata of diagnostic value. This would be true for Mongolian eyes, adenoids, Hutchinsonean teeth, etc. They are merely regarded as concomitant to the deficiency.

A study of the physical stigmata as outlined in this chapter would be of varying value to guidance advisers, depending upon the groups they were studying and advising.

Physical stigmata would be of little help in studying college students who have already been highly selected on the basis of superior intelligence as indicated by their ability to graduate from high school and to do college work. But if the groups studied are of lower intelligence, as in reform schools, detention homes, continuation schools, orphan asylums, etc., or more widely distributed, as in kindergartens, primary grades, and intermediate classes, a study of physical stigmata becomes increasingly valuable, not only for studying the individual child but also for making a rough diagnosis of other members of his family as their behavior might affect him.

Guidance advisers must reach out and systematically gather all sorts of information which might have a bearing on the diagnosis of any particular child. Physical stigmata and physical functioning are just one kind of information that should be used in making diagnoses.

## CASE PROBLEM

TABLE XLVI.—JUVENILE DELINQUENTS

(Up to 16 years of age)

The following table is adapted from tables on page 63 of *Annual Report of the Children's Court of the City of New York*, 1920:

| Clinical classification | Males | Females |
|---|---|---|
| Normal | 33 | 27 |
| Retarded | 64 | 5 |
| Dull normal | 40 | 54 |
| Moral defective | 7 | 3 |
| Feebleminded | 40 | 5 |
| Unstable | 87 | 13 |
| Border-line | 43 | 5 |
| Moron | 132 | 50 |
| Imbecile | 24 | 6 |
| Court psychological information | 6 | 10 |
| Neurotic | 10 | |
| Psychotic | 1 | 6 |
| Psychoneurosis | 1 | 1 |
| Epileptic | 5 | |
| Totals | 493 | 193 |

The following table appears on page 65 of the same report:

TABLE XLVII

| I.Q. | Males | Females | Totals |
|---|---|---|---|
| 20– 29 | . . . | 2 | 2 |
| 30– 39 | 1 | 1 | 2 |
| 40– 49 | 9 | 6 | 15 |
| 50– 59 | 72 | 24 | 96 |
| 60– 69 | 133 | 52 | 105 |
| 70– 79 | 131 | 37 | 168 |
| 80– 89 | 79 | 42 | 121 |
| 90–109 | 64 | 23 | 87 |
| 110+ | 2 | 4 | 6 |
| Not determined... | 2 | 2 | 4 |
| Totals.......... | 493 | 193 | 686 |

"Of the 686 cases examined, physical imperfections or abnormalities were noted in 495 cases" (page 66 same report).

The table on page 15 of the same report presents figures which show that the highest number of arraignments for the years 1919 and 1920 came in March, April, and May.

The following is adapted from a table on page 66:

TABLE XLVIII

| School grade attained | Cases |
|---|---|
| High school | 9 |
| Elementary school Grade 8 | 19 |
| Elementary school Grade 7 | 70 |
| Elementary school Grade 6 | 68 |
| Elementary school Grade 5 | 97 |
| Elementary school Grade 4 | 97 |
| Elementary school Grade 3 | 75 |
| Elementary school Grade 2 | 53 |
| Elementary school Grade 1 | 25 |
| No school | 1 |
| Ungraded | 120 |
| No record | 52 |
|  | 686 |

### Questions

1. Has the I.Q. any relation to anti-social behavior?
2. Which of these children would you brand as "bad?" Could they be "good" if they tried real hard?
3. Would education help them? What kind? In what way? Would severe punishment help? Would imprisonment improve them? What would you do?
4. Is it generally true that persons of low mentality tend to present physical imperfections and abnormalities? How do you account for this? Might this prove of value to a vocational adviser? In what way?
5. Of what significance are the spring months in this matter? Can you explain this fact? Is it of value? In what way?
6. How do you account for the fact that so many had made progress in school? Is there any inconsistency between the distribution of the I.Q.'s and the distribution of school grade attained? How do you account for it? Is this of any value to the vocational adviser? In what way?
7. What about "aptitudes" in this group?
8. What principles of vocational guidance are involved in this general situation?
9. In exactly what way could adequate vocational guidance help in this general situation?

### SUGGESTED READING LIST ON STIGMATA AND BEHAVIOR SYMPTOMS

1. Barr, M. W., *Mental Defectives*, P. Blakiston's Son and Company, Philadelphia, Pa., 1913.
2. Davenport, C. B., *Heredity in Relation to Eugenics*, Henry Holt & Company, New York, 1911.
3. Doll, E. A., *Anthropometry as an Aid to Mental Diagnosis*, The Training School, Vineland, N. J., 1916.
4. Goddard, H. H., *Feeblemindedness: Its Causes and Consequences*, The Macmillan Company, New York, 1914.
5. Ladd, G. T., and Woodworth, R. S., *Elements of Physiological Psychology*, The Macmillan Company, New York, 1911.
6. Mead, C. D., "The Relation of General Intelligence to Certain Mental and Physical Traits," *Contributions to Education*, No. 76, 1916, Teachers College, Columbia University, New York City.
7. Norsworthy, N., "The Psychology of Mentally Deficient Children," *Archives of Psychology*, Columbia University, New York, 1916.
8. Seguin, E., (64) *Idiocy: Its Diagnosis and Treatment by the Physiological Method*, revised 1866 under title "Idiocy and Its Treatment by the Physiological Method," reprinted by Teachers College, Columbia University, New York, 1907.
9. Shuttleworth, G. E. and Potts, W. A., *Mentally Deficient Children*, P. Blakiston's Son and Company, Philadelphia, Pa., 1916.
10. Talbot, E. S., *Degeneracy: Its Causes, Signs, and Results*, Charles Scribner's Sons, New York, 1898.
11. Tredgold, A. F., *Mental Deficiency*, William Wood and Company, New York (sec. ed.), 1915.

## CHAPTER XXII

## SURVEYS OF VOCATIONAL GUIDANCE SYSTEMS[1]

Many superintendents of schools think that they have within their school systems a complete system of vocational and educational guidance, simply because they have one or more people (generally on part-time) who are designated by the title Vocational Guidance Counselor. This is particularly true in those cities where placement offices or junior employment offices have been established as a more or less organic part of the public school system.

A school superintendent cannot logically be blamed for this condition. His scope of activities and responsibilities is wide and varied. In only a few of the phases of education can he possibly be expert, and this field of vocational and educational guidance is so new that few people have developed who are truly expert and often some of these are expert in only one phase of guidance.

If a superintendent of schools wishes to find out what is being done in the line of guidance in his schools, for the purpose of checking statements and performance, or for the purpose of showing the need for advances or new proposals, the logical procedure is to make a systematic survey. A newly engaged director of guidance should also do this at once, so that he or she may know definitely the conditions as they exist in regard to guidance. The method of surveying, as proposed here, is also a good method of indicating to superintendents, principals, teachers, and individuals, the developments that are possible along this particular line.

It would be quite possible to use the Outline of a Complete Guidance System[2] previously presented for the purpose of making a survey. If a superintendent is surveying his own school system, that outline might be sent to the principals of the various schools or school units, with the request that they indicate the conditions concerning each item by a check or a cross. If a State Superintendent is surveying the schools of the state, he would send the outline to the local superintendent.

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[1] See BARROWS, A. P., "Report of the Vocational Guidance Survey," *Bull.*, No. 9, Public Education Association, New York, 1912. Also, "Report of Bureau of Vocational Guidance," *Sixty-second Annual Report*, Superintendent of Schools, Chicago, Ill., 1916. Also, REED, A. Y., "Vocational Guidance Report," *Vocational Publication*, No. 2, Board of School Directors, Seattle, Wash., 1910.

[2] See chapter IX.

For the benefit of those who may wish to make a more complete survey, the following outline is presented:

## A GUIDANCE SURVEY OUTLINE

Name of school.................................Date.................
Name of city.................................State................
Name of person giving the information.................................
Position of person giving the information.............................

I. *School Population* (last school year)

(*a*) Number of children in your district of school age.............
(*b*) Number of children in your district attending parochial schools
.....................................................
(*c*) Number of children enrolled in your school (s)................

Special Classes

Opportunity....................
Subnormal......................
Adjustment....................
Rapid progress (gifted)..........
Prevocational..................
Junior high schools.............
Day vocational schools..........
Part-time schools (continuation)..
.............................
Cooperative classes.............
Evening classes—academic.......
Evening classes—vocational......
Evening classes—Americanization
.............................
Other special classes............
..................  ..........
..................  ..........
..................  ..........
..................  ..........
..................

Kindergarten.................
First grade....................
Second grade.................
Third grade..................
Fourth grade.................
Fifth grade...................
Sixth grade..................
Seventh grade................
Eighth grade.................
First-year high school.........
Second-year high school.......
Third-year high school.........
Fourth-year high school.......
First-year junior college.......
Second-year junior college......

II. *Occupational Statistics*[3]

(*a*) Total population of your district (city).......................
(*b*) Wage earners in:
(1) Manufacturing and mechanical pursuits........................... Minors....Adults....

---

[3] Fourteenth Census United States 1920, Vol. iv, Population, Occupations, Government Printing Office, Washington, D. C.

(2) Agricultural pursuits.............. Minors.... Adults....
(3) Domestic and personal service...... Minors.... Adults....
(4) Commercial pursuits.............. Minors.... Adults....
(5) Professional pursuits.............. Minors.... Adults....
(6) Transportation.................... Minors.... Adults....
(7) Mining.......................... Minors.... Adults....
(8) Public service...... ............. Minors.... Adults....

III. *School-leaving Statistics*

(*a*) Number of children granted employment certificates by years since establishment of certificate system:

19..............
19..............
19..............
19..............
19..............

(*b*) What are the requirements for employment certificates?
...........................................................
...........................................................
...........................................................
...........................................................

(*c*) How many exceptions to these requirements have been made during the past three years?

19..............
19..............
19..............

(*d*) Who grants these employment certificates?
...........................................................
...........................................................

(*e*) What proportion of their time does it take?..................
(*f*) What is their full salary?..................................
(*g*) How many students left your school (s) last year by grades, excluding graduates?

Special Schools

Prevocational...............
Junior high.................
Vocational day.............
Vocational evening..........
Continuation schools.........
Cooperative courses.........
Other special schools.........
.............................
.............................
.............................
.............................

Primary grades...............
Fifth grades.................
Sixth grades.................
Seventh grades...............
Eighth grades................
High School 1. ..............
High School 2. ..............
High School 3. ..............
High School 4. ..............
Junior College 1. ............
Junior College 2. ............

IV. *Personnel of the Guidance System*

(*a*) Do you have a system of:
(1) Vocational guidance?.... In which schools and classes?....
(2) Educational guidance?... In which schools and classes?....

(3) Moral guidance?........ In which schools and classes?....
(4) Social guidance?........ In which schools and classes?....
(5) Health guidance?....... In which schools and classes?....
(6) Vocational placement?... In which schools and classes?....
(7) Vocational information ...................... In which schools and classes?....
(8) Employment supervision and coordination........ In which schools and classes?....

(*b*) Names of persons spending *entire* time on (kind of)....guidance:
Name........................Salary.....................
Name........................Salary.....................

(*c*) Names of persons spending *part time* on (kind of)....guidance:
Name..........proportion time..........salary...........
Name..........proportion time..........salary...........

(*d*) Names of persons spending *entire* or *part time* on vocational placement:
Name..............Time..............Salary............
Name..............Time..............Salary............

(*e*) Names of persons spending *entire* or *part time*, giving vocational information:
Name..............Time..............Salary............
Name..............Time..............Salary............

(*f*) Names of persons spending *entire* or *part time* on employment supervision and coordination:
Name..............Time..............Salary............
Name..............Time..............Salary............

(*g*) Names of *visiting teachers—entire* or *part time:*
Name..............Time..............Salary............
Name..............Time..............Salary............

(*h*) Names of *deans—entire* or *part time:*
Name..............Time..............Salary............
Name..............Time..............Salary............

(*i*) Names of *clerks—entire* or *part time:*
Name..............Time..............Salary............
Name..............Time..............Salary............

(*j*) List here the name of every person having a *definitely assigned* guidance function in your school (s) and give the specific training they have had for that definitely assigned guidance function:
Name..............Training...........................
Name..............Training...........................
Name..............Training...........................
Name..............Training...........................
Name..............Training...........................

V. *Tests*

(*a*) Do you use standardized *intelligence* tests?....................
In which groups?............................................
When?.......................................................
For what purposes?..........................................
Which tests?................................................

Who gives them?....................................
Do you have or use a psychological clinic?....................
Do you employ a graduate psychologist?....................
(*b*) Do you use standardized *achievement* tests?....................
In which groups?....................................
When?............................................
For what purposes?..................................
Which tests?......................................
Who gives them?....................................
(*c*) Do you use *aptitude* tests of any kind?......................
In which groups?....................................
When?............................................
For what purposes?..................................
Which tests?......................................
Who gives them?....................................
(*d*) Do you use *prognosis* tests of any kinds?....................
In which groups?....................................
When?............................................
For what purposes?..................................
Which tests?......................................
Who gives them?....................................
(*e*) Do you use *vocational* tests of any kind?....................
In what groups?....................................
When?............................................
For what purposes?..................................
Which tests?......................................
Who gives them?....................................
(*f*) Do you use *psychiatric* tests or examinations of any kind?....
..................................................
In what groups?....................................
When?............................................
For what purposes?..................................
Which tests or examinations?..........................
Who gives them?....................................
Do you have or use a psychiatric clinic?....................
Do you employ a graduate psychiatrist?....................
(*g*) Do you give or have you given *physical* tests or examinations of any kind?............................................
In what groups?....................................
When?............................................
For what purposes?..................................
Which tests or examinations?..........................
Who gives them?....................................
Do you employ a physician?....Full time?....Part time?.....
Do you employ a dentist?.......Full time?....Part time?.....
Do you employ a nurse?........Full time?....Part time?.....
(*h*) Do you use *character* tests of any kind?......................
In what groups?....................................
When?............................................

For what purposes?........................................
Which tests?..............................................
Who gives them?...........................................
(*i*) Are the results of these tests filed and used?..................
For reference?............................................
Where?....................................................
By whom?..................................................

VI. *Classification of Pupils*

(*a*) Do you classify and segregate pupils on the basis of:
(1) I.Q?...................... Which school or classes?....
(2) Behavior?................. Which school or classes?....
(3) Physical defects?........... Which school or classes?....
(4) Special abilities?........... Which school or classes?....
(5) Special disabilities?......... Which school or classes?....
(6) Vocational interests?....... Which school or classes?....
(7) Vocational choices?......... Which school or classes?....
(8) Economic status?.......... Which school or classes?....
(9) Educational achievement?.. Which school or classes?....
(10) Teacher judgments?........ Which school or classes?....
(11) Chronological age?......... Which school or classes?....
(12) Race?.......................................
(13) Color?......................................
(14) Alphabetically?..............................

VII. *Vocational Information*

(*a*) Do you have regular classes in vocational information?........
How many?.............Where?.......................
(*b*) Is the task of giving vocational information *definitely assigned* to some person or persons?...............................
Whom?.................Where?........................
(*c*) Is vocational information given in connection with other school subjects, such as English, civics, geography taught by regular teachers?..............................................

..................................................
(*d*) Are students systematically taken to visit:
Stores?.............Which students?.......How often?......
Offices?............Which students?.......How often?......
Factories?..........Which students?.......How often?......
Other schools?......Which students?.......How often?......
(*e*) How is the vocational information collected?

..................................................

..................................................
(*f*) What books on vocational information are used?
As texts..................................................
As reference..............................................
Teachers' handbook........................................
(*g*) Are the pupils segregated in groups for the purpose of receiving vocational information?..................................
On what basis?............................................

(*h*) **Are all pupils in certain schools or grades given the same kind of vocational information?..................................**
**Which schools or grades?..................................**

(*i*) **Have job analyses been made?..................................**
**What jobs?..................................**
**What outline?..................................**
**When?..................................**
**By whom?..................................**
**Where obtainable?..................................**

(*j*) Have any of the following surveys been made?
(1) Industrial opportunities?....When?....By whom?........
(2) Industrial education?........When?....By whom?........
(3) Commercial opportunities?...When?....By whom?........
(4) Commercial education?......When?....By whom?........
(5) Students?..................When?....By whom?........
(6) Social?....................When?....By whom?........
(7) Where may these surveys be obtained?..................
..................................................
..................................................

(*k*) List here the names, amount of time given, and salaries of every person definitely assigned to the task of giving vocational information:
Name............School........Time........Salary........
Name............School........Time........Salary........
Name............School........Time........Salary........
Name............School........Time........Salary........
Name............School........Time........Salary........
Name............School........Time........Salary........
Name............School........Time........Salary........
Name............School........Time........Salary........
Name............School........Time........Salary........

VIII. *Extra-classroom Activities*

(*a*) List here the extra-curricula activities that you consider as functioning as guidance, such as Life-career Club, Engineering Club, Orchestra, Glee Club, Camera Club, Nature Club, Debating Club, etc.:
Name....................School........................
Name....................School........................
Name....................School........................
Name....................School........................
Name....................School........................
Name....................School........................
Name....................School........................
Name....................School........................
Name....................School........................

IX. *Student Participation-Government*

(*a*) If you have any form of student organization that participates in the government of the school, give a brief outline of its organization.

..........................................................

..........................................................

..........................................................

..........................................................

X. *Scholarships*

(*a*) Do you have any form of scholarships for enabling high-grade but needy students to continue their education? If so, please describe them.

..........................................................

..........................................................

..........................................................

XI. *"Try-outs"*

(*a*) Do you have any specific try-out courses in your schools?.......

Industrial?.................Which schools?.................

What trades?...............Which schools?.................

Commercial?...............Which schools?.................

Homemaking?..............Which schools?.................

Academic?.................Which schools?.................

Art?.......................Which schools?.................

Music?.....................Which schools?.................

Agricultural?...............Which schools?.................

XII. *Vocational Education Courses*

(*a*) List here the courses in your schools that you consider as specifically vocational:

(1) Industrial Grade Entrance Requirements Smith-Hughes aid?

........ .... .................. ................

........ .... .................. ................

........ .... .................. ................

........ .... .................. ................

(2) Homemaking

........ .... .................. ................

........ .... .................. ................

........ .... .................. ................

........ .... .................. ................

........ .... .................. ................

(3) Commercial

........ .... .................. ................

........ .... .................. ................

........ .... .................. ................

........ .... .................. ................

........ .... .................. ................

(4) Agricultural

........ .... ................ ... ...........
........ .... ................ ... ...........
........ .... ................ ... ...........
........ .... ................ ... ...........
........ .... ................ ... ...........

(*b*) List here the vocational courses in schools in your district (city) that are not a part of the public school system but are maintained for private gain:

.................................................................
.................................................................
.................................................................

(*c*) List here the vocational courses in schools in your district (city) that are not part of the public school system but are maintained by philanthropists or endowments and not run primarily for gain:

.................................................................
.................................................................
.................................................................

## XIII. *Outside Agencies Practicing Guidance*

(*a*) List here the names and addresses of any private agencies outside the public schools that practice guidance for gain:

.................................................................
.................................................................
.................................................................
.................................................................

(*b*) List here the names and addresses of any privately endowed or philanthropic agencies that practice guidance (with or without fees) not primarily for gain:

.................................................................
.................................................................
.................................................................
.................................................................

## XIV. *The Cost of Guidance*

(*a*) List here the guidance items in last year's budget:

.................................................................
.................................................................
.................................................................
.................................................................

Amount of deficit or surplus:..............................

(*b*) List here the items chargeable to guidance in this year's budget:

(1) Personnel:

| Name | Function | Time | Salary |
|---|---|---|---|
| ........... | ........... | ........... | ........... |
| ........... | ........... | ........... | ........... |
| ........... | ........... | ........... | ........... |
| ........... | ........... | ........... | ........... |
| ........... | ........... | ........... | ........... |

(2) Materials:

Tests:

| | Name | Number | Cost |
|---|---|---|---|
| | ............ | ............ | ............ |
| | ............ | ............ | ............ |
| | ............ | ............ | ............ |
| | ............ | ............ | ............ |
| | ............ | ............ | ............ |

Printing and mimeographing:

| Name | Number | Cost |
|---|---|---|
| ............ | ............ | ............ |
| ............ | ............ | ............ |
| ............ | ............ | ............ |
| ............ | ............ | ............ |
| ............ | ............ | ............ |

(3) Furniture

Desks............................................

Seats............................................

Bookcases........................................

Filing cases.....................................

Miscellaneous....................................

XV. *New Proposals*

(*a*) What new guidance proposals have been definitely approved for next year?

.........................................................

.........................................................

.........................................................

(*b*) What new guidance proposals have been definitely disapproved for next year?

.........................................................

.........................................................

.........................................................

(*c*) What new guidance proposals are now in process of formulation for next year?

.........................................................

.........................................................

.........................................................

.........................................................

(*d*) Upon what surveys, studies, research, data, resolutions, etc. were these new proposals formulated?

.........................................................

.........................................................

.........................................................

.........................................................

.........................................................

## CHAPTER XXIII

## SOME UNSOLVED PROBLEMS OF GUDIANCE

The development of the economic order in this country may be roughly divided into three parts: *First,* during the colonial period the big problem was that of *production* to satisfy immediate pressing and personal needs of food, shelter, and clothing.

*Second,* during the period ante-dating the Civil War, there were the problems of *distributing* the local surplus of materials produced. During the solution of this problem there was the remarkable development of steam railroads, steamship lines, and canals. We are just at the end of that period, but the problem of distribution is still with us, as is indicated by our national advertising campaigns.

*Third,* the *personnel* period, upon which we are just now entering. At the present time we are thinking more than ever before in terms of people. The new science of psychology, the tests of intelligence, vocational tests, rating scales, the development of the personnel engineer and the labor manager in industry, the idea of industrial democracy, collective bargaining, equalizing the opportunities for a fitting education for all classes of people are a few of the indications of this period.

It is in the movements, propositions, and experiments of this period that the movement for vocational and life guidance finds its place. In our public schools we are thinking in terms of boys and girls, their needs, their capacities, and their individual, social, and economic differences, and not so entirely in terms of subjects.[1] We are slowly, but surely, making over our schools to fit the pupils instead of requiring that the pupils either fit themselves to the schools or get out. From these fundamental causes and effects arises the embryonic guidance movement.

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[1] See SNEDDEN, D., *Sociological Determination of Objectives in Education,* J. B. Lippincott Company, Philadelphia, Pa., 1921. LEWIS, W. D., *Democracy's High School,* Houghton Mifflin Company New York, 1914. DEVEY, EVELYN, and DEVEY, JOHN, *Schools of Tomorrow,* E. P. Dutton, & Company, New York, 1915. ELIOT, C. W., "Changes Needed in American Secondary Education," *Paper,* No. 2, General Education Board, New York, 1916.

We have spent a lot of time philosophizing, theorizing, promoting, and propagandizing in regard to vocational guidance. It is now time to get down to the bedrock of facts and conditions, make good, and produce. Words, no matter what their quantity or quality, nor by whom spoken, will no longer suffice. We must change from the philosophical "I believe" to the scientific "I know." We must abandon the sentimental, impressionistic, aspirational, idealistic attitude that is based largely on prejudices and emotion, and adopt the scientific attitude and methods in the great task that confronts us.

1. One of our first tasks is to adopt certain policies, elucidate certain principles, (see Chapter IV), define certain terms (see Chapter III), and define and limit our scope of responsibility and activity (see Chapters, XIV–XV). This must be done quite soon or we will find that such persons as the ever-experimenting, ever-defining psychologists and sociologists will know more about our job than we do ourselves. It behooves us, then, to reach out into their fields and many others, and draw from them, and make use of, any knowledge and methods that will be of service to us.

2. Probably our most pressing problem is one that includes both objective and method. Just where do we stand in regard to the use of the wide variety of tests, measures, and scales and the data derived by their use? Are we advocating guidance as consisting primarily of giving to all pupils a wide variety of unselected vocational information and exposing them to a series of so-called "try-out" courses for the purpose of self-discovery and letting the pupils guide themselves? In other words, is our chief purpose that of offering guidance for the purpose of self-guidance? If so, just exactly how shall we do it? What methods of checking the results of our guidance shall we use?

3. Or, shall we advocate the use of the scales, tests, measures, and statistical devices of the psychologist and educational statistician, which Professor James is reported to have christened "brass instrument psychology?" Shall we advocate the use of intelligence tests, intelligence levels, prognosis tests, aptitudes tests, character tests, achievements tests, and psychoneurotic inventories? When making such a decision we must consider so far as is possible both the proximate and ultimate results of such a decision. Do we stand for "grooving" or guidance, or a happy combination of both?

4. Another problem, growing naturally out of the above, is the necessity of developing a more or less standardized methodology, and systems of organization and administration of vocational guidance (see Chapters IX–XII). Is guidance an integral part of our educational system or is it something just tacked on? What is the place and authority of the director of vocational guidance in a school system, to whom is he or she responsible, over whom do they have authority, and how much? Is the director of guidance superior, equal, or subordinate to the principals? What is their relationship to the director of vocational education? To the director of research and statistics?

5. What is the best method of training vocational advisers? Directors of vocational and educational guidance? Visiting teachers? Placement officers? What required courses should they take? What elective courses be offered them? What institutions offer such training in the form of systematic curricula? What should be the prerequisites for entrance to such courses? What training have present holders of such positions received?

6. We need a much better formulation of our objectives and this cannot well be done until we have defined our terminology? Is vocational guidance just exactly that and nothing else? Or does it include both vocational and educational guidance? If so, why not also include social guidance, moral guidance, physical guidance, civic guidance, guidance in ethics and aesthetics, and many other fields in which the youth of our land need guidance? Why not call it "life guidance?" Just where are the limits of our activities? Just what are our functions? What are our objectives, major and minor? How shall we set about accomplishing that which we decide upon as our objectives?

7. We need to question and critically examine some of our statements and beliefs. Just how much weight should be given to the expressed interests of youth of certain ages? Of certain intelligences? Of certain social and economic levels? Are the interests of young people permanent enough so that we may use them as a basis for guidance? How much weight shall we attach to such studies as that made by Willet,[2] in which he presents data from which he deduces that

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[2] WILLETT, G. W., "Permanence of Pupil Interests," *School and Society*, vol. ix, No. 210, March 15, 1919, p. 334; No. 211, March 22, 1919, p. 365.

> Vocational advice given to these boys on the basis of their occupational interests would have been well placed in less than one out of five cases. . . . Vocational advice given to freshman girls on the basis of choice would have been correct in one out of six cases.

8. We need to scrutinize more carefully the vocational information we are giving to students. How much of it is vocational misinformation? What is the best method of collecting vocational information? The best method of distributing it? How may we keep it accurate and up-to-date? What special method of teaching it?

9. Shall we or shall we not discuss and express personal points of view in our vocational information classes on such controversial questions as whether workers should organize into unions and which of the three types of unions? The right to strike? Collective bargaining? Soviet Russia? The minimum wage? The living wage? The saving wage? Of so, which titular head shall we hold up as an ideal, the late Samuel Gompers or W. G. Foster? And which of us is to decide that question?

10. What about try-out courses? Which is the best for guidance purposes—the "Ettinger plan" of separate shops in charge of specialists, the "Russell-Bonser" plan of a general industrial shop, the "Gary plan" of supervised productive work under a mechanic, or the "Pittsburgh combination plan?" Which do we advocate? On what basis of facts? Do you think these so-called try-out courses really try out? If so, for what? Are they negative or positive guidance? New York City public schools teach nearly 200 occupations in their vocational classes, and they have only 10 occupations represented in their try-out courses while the workers of New York City are employed in 17,000 occupations.

11. We talk, write, and read a lot about "aptitudes." Just exactly what are they? Have we a list of them? What aptitudes tests do we have? Are aptitudes inherited? In what vocations are they necessary? What is their relation to general intelligence?

12. What method do we have of checking the results of our guidance? For particular groups and individuals was it guidance, misguidance, or merely a contributing experience? We simply must work out some definite method of testing and checking the results of our work. If we do not, some other group will,

with possible disastrous results for some of our pet beliefs and theories.

13. What achievement tests do we have in industrial education, industrial arts, manual training, household arts, commercial arts that compare in even the slightest degree with achievement tests in other school subjects? Would such achievement tests be of value to us in our work of guidance? Why have we not developed them?

It is only from a frank, impersonal, and unbiased discussion of such problems and varying points of view on a professional level that we will ever achieve the desirable optimum of solidarity, unification, and agreement on fundamentals concerning guidance that we must achieve in the next few years if we are to justify our existence. It is our responsibility to promote such discussion, resulting in the eventual formulation of principles, objectives, and methods which will place the guidance movement on a parity with other educational movements.

# APPENDIX A

## A GENERAL READING LIST IN GUIDANCE

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70. McKeever, William A., *Training the Boy*, The Macmillan Company, New York, 1913.

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72. Moore, B. F. and Edwards, Helene, *Vocational Cultural Reader*, D. C. Heath and Company, Boston, Mass., 1920.

73. Moran, Selby A., *Over 100 Ways to Work One's Way through College*, The University Press, Ann Arbor, Mich., 1906.

74. Munsterberg, Hugo, *The Choice of a Vocation*, in his American problems from the point of view of a psychologist, Moffat, Yard and Company, New York, 1910, pp. 25–43.

75. Odencrantz, Louise C., *Italian Women in Industry: A Study of Conditions in New York*, Russell Sage Foundation, New York, 1919, 345 pp.

76. O'Donovan, G., *Vocations*, Boni & Liveright, New York, 1922.

77. *Opportunities in Occupations Other Than Teaching*, Intercollegiate Bureau of Occupations, New York, July, 1915.

78. Palmer, G. H., *Trades and Professions*, Houghton Mifflin Company, Boston, Mass., 1914, 35 pp.

79. Pearson, G. C., *Selling Your Services*, Jordan-Goodwin Company, New York, 1920.

80. Perry, Frances M., *Four American Inventors, a Book for Young Americans*, American Book Company, New York, 1901.

81. Pressey, Park, *A Vocational Reader*, Rand McNally & Company, New York, 1916.

82. Reed, Anna Y., *Newsboy Service*, The World Book Company, Yonkers, N. Y., 1917, 168 pp.

83. Rocheleau, W. F., *Geography of Commerce and Industry*, Educational Publishing Company, Chicago, Ill., 1908.

84. Rocheleau, W. F., *Great American Industries*, Third Book, "Manufactures," A. Flanagan Company, Chicago, Ill., 1909.

85. Rocheleau, W. F., *Great American Industries*, First Book, "Minerals," A. Flanagan Company, Chicago, Ill., 1902.
86. Rocheleau, W. F., *Great American Industries*, Fourth Book, "Transportation," A. Flanagan Company, Chicago, Ill., 1910.
87. Rolins, Frank West, *What Can a Young Man Do?* Little, Brown, and Company, Boston, Mass., 1907.
88. *Careers for the Coming Men, Practical and Authoritative Discussions of the Professions and Callings Open to Young Americans*, Saalfield Publishing Company, New York, 1904.
89. Schreiner, Olive, *Woman and Labor*, Frederick A. Stokes Company, New York, 1911, 299 pp.
90. Schwab, Charles M., *Succeeding with What You Have*, The Century Company, New York, 1917.
91. Seashore, Carl E., *An Open Letter to College Seniors*, National Research Council, Washington, D. C., 8 pp.
92. Shidle, N. G., *Finding Your Job*, The Ronald Press Company, 1921.
93. Smith, J. Russell, *Commerce and Industry*, Henry Holt & Company, New York (Revised), 1920.
94. Smith, J. Russell, *The World's Food Resources*, Henry Holt & Company, New York, 1919.
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100. *Trade Foundations Based on Producing Industries*, Guy M. Jones Company, Indianapolis, Ind., 1919.
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103. Twombly, Frances Doane and Dana, John Cotton, *The Romance of Labor—Scenes from Good Novels Depicting Joy in Work*, The Macmillan Company, New York, 1916.
104. Van Kleeck, Mary, *Working Girls in Evening Schools*, Russell Sage Foundation, New York, 1914, 252 pp.
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7. *Vocational Rehabilitation Series*, Federal Board for Vocational Education, Washington, D. C.

8. Providence, R. I. School Committee, "Vocational Talks," in its *Report* 1909–1910, pp. 59–64. Subjects of talks given the pupils not going into high school from eighth grade, in Providence, pp. 61–62.

09. "Vocational Training," *Association of Collegiate Alumnae Bull.*, No. 1, April, 1913. Press of Gazette Printing Company, Northampton, Mass., 1913, 137 pp.

10. *Vocations for Business and Professional Women*, The Bureau of Vocational Information, National Board of the Y. W. C. A., May, 1919, 46 pp.

11. *Vocations for the Trained Woman*, Women's Educational and Industrial Union Department of Research, Boston, Mass., 296 pp.

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13. Weaver, E. W. and Byler, J. G., *Profitable Vocations for Boys*, A. S. Barnes Company, New York, 1915.

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15. Weaver, Eli W., *Syllabus of Twenty Weekly High School Lessons on Vocational Information*, A. S. Barnes Company, New York, 1916.

116. Weaver, E. W., *Profitable Vocations for Girls*, The A. S. Barnes Company, New York, 1918.

117. Gowin, Enoch Burton, Wheatley, Alonzo, and Brewer, John M., *Occupations: A Textbook for the Educational Civic and Vocational Guidance of Boys and Girls*, Rev. ed., Ginn and Company, 1923.

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119. Williams, George H. (Editor), *Careers for Our Sons: A Practical Handbook to the Professions and Commercial Life*, Adam and Charles Black, London, 1914.

120. Wilson, Calvin D., *Working One's Way Through College*, A. C. McClurg & Company, Chicago, Ill., 1912.

121. Wingate, Charles F., *What Shall Our Boys Do for a Living?* Doubleday and McClure, 1898, 287 pp.

122. Women's Educational and Industrial Union, Boston, Mass., Studies in Economic Relations of Women. The volumes of the set are as follows: vol. i, Parts I and II, *Vocations for the Trained Woman* (out of print, 1914). Part III, Francke, Marie, *Opportunities for Women in Domestic Science*, Association of Collegiate Alumnae, 1916.

Vol. ii, *Labor Laws and Their Enforcement*, with special reference to Massachusetts, 1911.

Vol. iii, Bosworth, Louise Marion, *The Living Wage of Women*, 1911.

Vol. iv, Allinson, May, *Dressmaking as a Trade for Women*, U. S. Bureau of Labor Statistics, 1916.

Vol. v, Perry, Lorinda, *Millinery as a Trade for Women*, 1916.

Vol. vi, *The Boot and Shoe Industry as a Vocation for Women*, U. S. Bureau of Labor Statistics, 1915.

Vol. vii, *Industrial Home Work in Massachusetts*, Massachusetts Bureau of Statistics, 1915.
Vol. viii, *The Public Schools and Women in Office Service*, Boston School Committee, 1914.
Vol. ix, *Industrial Experience of Trade School Girls in Massachusetts*, U. S. Bureau of Labor Statistics, 1917.
Vol. x, *The Food of Working Women in Boston, Massachusetts*, Department of Health, 1917.

123. *Women in Business*, News-bulletin of the Bureau of Vocational Information, New York, 1923.
124. WOODBURY, R. M., "Industrial Instability of Child Workers," *Bureau Publication, No.* 74, Children's Bureau, U. S. Department of Labor, Washington, D. C., 1920.
125. WOODBURY, H. S., "The Working Children of Boston," *Bureau Publication, No.* 89, Children's Bureau, U. S. Department of Labor, Washington, D. C., 1922.
126. WOODS, ROBERT A. and KENNEDY, ALBERT J. (Editors), *Young Working Girls*, a summary of evidence from two thousand social workers, introduction by ADAMS, JANE, Houghton Mifflin Company, Boston, Mass., 1913.
127. LYON, L. S., *Education for Business*, University of Chicago Press, Chicago, Ill.
128. RUSSELL, CHARLES E. B., *Manchester Boys: Sketches of Manchester Boys at Work and Play* (Sec. ed.), Manchester University Press, Manchester, England, 1913.
129. *Seasonal Operation in the Construction Industries: The Facts and Remedies*, report and recommendations of a committee of the President's Conference on Unemployment, with a foreword by Herbert Hoover, McGraw-Hill Book Company, Inc., New York, 1924, 213 pp.

# APPENDIX D

## A LIST OF PUBLICATIONS DEALING WITH TESTS AND METHODS OF TESTING USEFUL IN THE FIELD OF GUIDANCE

1. *Army Mental Tests: Methods, Their Results and Practical Applications*, U. S. Adjutant General's Office, Division of Psychology War Department, Washington, D. C., 1918.
2. Beeson, M. F., "Educational Tests and Measurements," *Colorado State Teachers College, Bull., No.* 3, 1920, vol. xx, 66 pp.
3. Burt, Cyril, *Mental and Scholastic Tests*, P. S. King and Son, London, 1921.
4. Burr, Emily, "Psychological Tests Applied to Factory Workers," *Archives of Psychology, No.* 55, Columbia University, New York, May, 1922.
5. Bregman, Elsie O., "Studies in Industrial Psychology," *Archives of Psychology, No.* 59, Columbia University, New York, Sept., 1922.
6. Chassell C. F. and Chassell, E. B. and Chassell, L. M., "A Test of Ability to Weigh Foreseen Consequence," *Teachers College Record*, vol. xxv, No. 1, Teachers College, Columbia University, New York, January, 1924.
7. Chapman, J. C., *Trade Tests: A Scientific Measurement of Trade Proficiency*, Henry Holt & Company, New York, 1921.
8. Chapman, J. C. and Rush, G. P., *The Scientific Measurement of Classroom Products*, Silver Burdett Company, New York, 1917.
9. "Extension of Selected Tests to Industry Annals," *American Academy of Political and Social Science*, vol. lxxxi, pp. 38-46, Philadelphia, Pa., 1919.
10. Fretwell, E. K., "A Study in Educational Prognosis," *Contributions to Education, No.* 99, Teachers College, Columbia University, New York, 1919.
11. Hollingworth, L., *Judging Human Character*, D. Appleton & Company, New York, 1922.
12. Hollingworth, H. L., *Vocational Psychology*, D. Appleton & Company, New York, 1917.
13. Hollingworth, Leta S., *Special Talents and Defects*, The Macmillan Company, New York, 1923, 216 ff.
14. "Intelligence Tests and Their Use," *Twenty-first Yearbook*, Parts I and II, National Society for the Study of Education, Public School Publishing Company, Bloomington, Ill., 1922.
15. Kemble, W. F., *Choosing Employees Mental and Physical Tests*, The Engineering Magazine Company, New York, 1917.

16. Kelley, T. L., "Educational Guidance," *Contributions to Education, No.* 71, Teachers College, Columbia University, New York, 1914.

17. Link, H. C., *Employment Psychology*, The Macmillan Company, New York, 1919.

18. Monroe, W. S., Devoss, J. C. and Kelly, F. I., *Educational Tests and Measurements*, Houghton Mifflin Company, New York, 1917.

19. "Psychological Tests," *Annals, American Academy of Political and Social Science*, vol. lxv, pp. 41–43, Philadelphia, Pa., 1916.

20. Pressey, S. L., "Suggestions with Regard to Use of Mental Tests and in Particular with Regard to Their Use in Combination with Tests of Achievement," *Indiana University Bulletin of Extension.*

    Pressey, S. L. and Pressey, L. C., *Introduction to the Use of Standard Tests*, World Book Company, Yonkers, N. Y., 1922.

21. Proctor, W. M., "Psychological Tests and Guidance of High School Pupils," *Journal of Educational Research Monographs, No.* 1, Public School Publishing Company, Bloomington, Ill., June, 1921.

22. Pintner, R. and Paterson, D. G., *A Scale of Performance Tests*, D. Appleton Company, New York, 1917.

    Pintner, R., *Intelligence Testing*, Henry Holt & Company, New York, 1923.

23. Rogers, H. M., "Some Empirical Tests in Vocational Selection," *Archives of Psychology, No.* 49, Columbia University, New York, April, 1922.

24. Scott, W. D., "Vocational Selection at Carnegie Institute of Technology," *Bull., No.* 227, U. S. Bureau of Labor Statistics, Washington, D. C., 1917.

25. Steacy, F. W., "The Interrelations of Mental Abilities," *Contributions to Education, No.* 95, Teachers College, Columbia University, New York, 1919.

26. Stenquist, John L., "Measurements of Mechanical Ability," *Contributions to Education, No.* 130, Teachers College, Columbia University, New York, 1923.

27. Toops, H. A., "Tests for Vocational Guidance of Children of Thirteen to Sixteen," *Contributions to Education, No.* 136, Teachers College, Columbia University, New York, 1923.

28. Terman, L. M., *The Measurement of Intelligence: A Revision and Extension of the Binet-Simon Intelligence Scale*, Houghton Mifflin Company, New York, 1916.

29. Trabue, M. R. and Stockbridge, F. P., *Measure Your Mind: The Mentimeter and How to Use It*, Doubleday, Page & Company, New York, 1921.

30. Toops, H. A., "Trade Tests in Education," *Contributions to Education, No.* 115, Teachers College, Columbia University, New York, 1921.

31. Upton, S. A. and Chassell, C. F., "A Scale for Measuring the Importance of Habits of Good Citizenship," *Teachers College Bulletin, Twelfth Series, No.* 9, Teachers College, Columbia University, New York, January, 1921.

32. Wood, Ben D., *Measurements in Higher Education*, Teachers College, Columbia University, New York, 1923.

33. **Whipple**, G. M., *Manual of Mental and Physical Tests*, Warwick and York, Baltimore, Md., 1910.
34. **Yerkes**, R. M. and **Foster**, J. C., *A Point Scale for Measuring Mental Ability* (1923 Rev.), Warwick and York, Baltimore, Md., 1923.
35. **Yerkes**, R. M. (Editor), *Psychological Examining in the United States Army Memoirs of the National Academy of Sciences*, vol. xv, Government Printing Office, Washington, D. C., 1921.
36. **Yoakum**, C. S. and **Yerkes**, R. M., *Army Mental Tests*, Henry Holt & Company, New York, 1920.

# APPENDIX E

## LIST OF BIBLIOGRAPHIES OF TESTS USEFUL IN VOCATIONAL AND EDUCATIONAL GUIDANCE

1. Brewer, J. M. and Kelly, K. W., *A Selected Critical Bibliography of Vocational Guidance*, Harvard University Press, Cambridge, Mass.
2. Bryner, Edna, "A Selected Bibliography of Certain Phases of Educational Measurements," *Seventeenth Yearbook*, Part II, National Society for the Study of Education; *The Measurement of Educational Products*, chap. XIII, published by Public School Publishing Company, Bloomington, Ill., 1918.

   Gives a list of 606 references in 9 divisions, dealing with significant phases of educational measurements. (Chapter VII same reference describes existing tests and standards for elementary and secondary schools.)
3. Breslich, E. Retal, "A Brief Bibliography of Tests in High School Subjects," *School Review*, 27: 799–809, Dec., 1919. A description list of high school tests in Latin, Mathematics, Science, Home Economics and History. Rather complete annotations are given, together with references. (For history tests, see article by Rugg, E. U., especially pp. 768–769, same magazine.)
4. Bureau of Research, University of Illinois, *First Annual Report*, published by University of Illinois, Urbana, Ill., as *Bull., No.* 9, vol. xvii, October, 1919.

   Chapter VII describes several standardized tests for high school subjects and chap. VIII describes six mental tests.

   *Educational Tests and Scales*, price list of February, 1921, Bureau of Publishing, Teachers College, New York.
5. Ferguson, W. E., *A Brief Treatise on Standard Tests and Measurements, A List of Standard Test and Measurements in General Use*, World Book Company, Yonkers, N. Y.
6. Holly, Charles E., "Mental Tests for School Use," *Bull. No.* 4, University of Illinois, Urbana, Ill.
7. Jacobs, Charles L., "Bibliography on Vocational Guidance," *Bull. No.* 66, June, 1921, Federal Board for Vocational Education, Washington, D. C.
8. Kohs, Samuel C., *The Binet-Simon Measuring Scale for Intelligence: An Annotated Bibliography: Journal of Educational Psychology*, vol. v, April, p. 215 ff., May, p. 279 ff., June, p. 355 ff.
9. Morrison, J. E., "Educational Measurements: A Selected Bibliography," *Bull. No.* 734, published by the University of the State of New York, Albany, N. Y., 1921.
10. Mohlman, D. K., "A List of References on Tests," *School and Society*, vol. xvi, No. 404, Sept. 23, 1922, 363 pp.

11. Monroe, W. S., "Standardized Tests for High School," *Journal of Educational Research*, 1920, pp. 148-153; March, pp. 228-242; April, pp. 311-320, published by Public School Publishing Company, Bloomington, Ill. The 14 divisions of this bibliography gave the most complete printed list of high school tests. Tests are described briefly and references are annotated. Author's address and the publisher for each test also given.

    *Price List and Order Blank of Tests*, Public School Publishing Company, Bloomington, Ill., March, 1921.

12. Ruger, G. J., *Psychological Tests, Revised and Classified Bibliography*, published by Bureau of Educational Experiments, New York.

13. Ruger, G. J., "Psychological Tests," a bibliography, supplement to January, 1918, *Bull., No.* 6, Supplement 1, published by Bureau of Educational Experiments, New York.

    References on the Binet-Simon Scale, and on other mental tests, chiefly of a specialized nature.

14. C. H. Stoelting and Company, *Catalog of Test Apparatus and Supplies*, Chicago, Ill., 1923.

15. Tillinghast, C., Kelly, T. L. and Briggs, T. H., "A Bibliography of Tests for Use in High Schools," *Teachers College Record, No.* 4, vol. xxiii, September, 1922, 375 pp. ff.

    "Tests and Scales," *The Journal of the National Educational Association*, vol. x, No. 4, 79 pp. ff.

16. U. S. Bureau of Education, "List of References on Educational Tests and Measurements," *Library Leaflet, No.* 2, published by Bureau of Education, Washington, D. C., April, 1919. Lists a number of tests for elementary and high schools, with references.

# APPENDIX F

## A LIST OF BULLETINS PUBLISHED BY THE UNITED STATES BUREAU OF EDUCATION CONCERNING VOCATIONAL GUIDANCE

1906, No. 2, "German Views of American Education, with Particular Reference to Industrial Development," William N. Hailmann, 1st ed., 55 pp.; 2d ed., 55 pp.

1907, No. 1, "The Continuation School in the United States," Arthur L. Jones, 157 pp.

No. 4, "The Elimination of Pupils from School," Edward L. Thorndike, 63 pp.

1908, No. 6, "The Apprentice System in Its Relation to Industrial Education," Carroll D. Wright, 116 pp.

1911, No. 5, "Age and Grade Census of Schools and Colleges, A Study of Retardation and Elimination," George D. Strayer, 114 pp.

No. 11, "Bibliography of Child Study for the Years 1908–9," Louis N. Wilson, 84 pp.

No. 14, "Provision for Exceptional Children in the Public Schools," J. H. Van Sickle, Lightner Witmer and Leonard P. Ayres, 92 pp.

1912, No. 3, "Report of Committee on Uniform Records and Reports," 46 pp.

No. 11, Current educational topics, No. I, 26 pp.: "New Phases of Education in Buffalo, N. Y."

"Juvenile Labor Bureaus and Vocational Guidance in Great Britain."

No. 26, "Bibliography of Child Study for the Years 1910–11," 90 pp.

No. 32, "Bibliography of Exceptional Children and Their Education," Arthur MacDonald, 46 pp.

1913, No. 7, "College Entrance Requirements," Clarence D. Kingsley, 110 pp.

No. 9, Consular reports on continuation schools in Prussia, 30 pp.:

1. "Vocational Training in Magdeburg," L. Ives.
2. "Part-time Schools for Industrial Workers," Ralph C. Busser.
3. "City Continuation and Trade School of Brunswick," Talbot J. Albert.
4. "Continuation Schools of Barmen," Eugene Eager.
5. "Part-time Shoe Schools in Breslau," Frank G. Potts.

**Note.—Most of these bulletins may be purchased from the Superintendent of Documents, Government Printing Office, Washington, D. C.**

No. 17, "A Trade School for Girls, A Preliminary Investigation in a Typical Manufacturing City, Worcester, Mass.," 59 pp.
No. 19, "German Industrial Education and Its Lessons for the United States," Holmes Leckwith, 154 pp.
No. 22, "Bibliography of Industrial, Vocational and Trade Education," 92 pp.
No. 25, "Industrial Education in Columbus, Ga.," Roland D. Daniel, 30 pp.
No. 50, "The Fitchburg Plan of Cooperative Industrial Education," Matthew R. McCann, 28 pp.
No. 54, Consular reports on industrial education in Germany, 75 pp.:
  1. "The System of Industrial Schooling."
  2. "Schools for Builders."
  3. "Preparatory Courses for Master Craftsmen."
  4. "Meisterkurse at Frankfort on the Main."
  5. "The Trade Institute at Cologne."
  6. "Schools for Fruit-growing."
1914, No. 2, Compulsory school attendance, 137 pp.:
  1. "Compulsory Attendance Laws in the United States," W. S. Deffenbaugh.
  2. "Compulsory Attendance in Foreign Countries," Anna Tolman Smith.
  3. "Compulsory Education in Germany," W. Carson Ryan, Jr.
  4. "The Need of Compulsory Education in the South," William H. Hand.
  5. "Laws of Ohio and of Massachusetts Relating to Compulsory Attendance and Child Labor."
No. 4, "The School and the Start in Life, A Study of the Relation between School and Employment in England, Scotland and Germany," Meyer Bloomfield, 146 pp.
No. 10, "Physical Growth and School Progress, A Study in Experimental Education," Bird T. Baldwin, 215 pp.
No. 14, "Vocational Guidance," papers presented at the organization meeting of the Vocational Guidance Association, Grand Rapids, Mich., 1913, 94 pp.
No. 23, "Some Trade Schools in Europe," Frank L. Glynn, 76 pp.
No. 40, "Care of the Health of Boys in Girard College, Philadelphia, Pa.," 20 pp.
1915, No. 4, "The Health of School Children," contributions from American medical journals, July, 1913 to July, 1914, compiled by W. H. Heck, 160 pp.
No. 19, "Statistics of Certain Manual Training, Agricultural and Industrial Schools, 1913-1914," 79 pp.
No. 29, "The Truant Problem and the Parental School," James S. Hiatt, 35 pp.
No. 33, "Problems of Vocation in Germany, with Special Application to Conditions in the United States," George E. Myers, 42 pp.
No. 50, "Health of School Children—II," compiled by W. H. Heck, 187 pp.

1916, No. 3, "Placement of Children in the Elementary Grades, A Study of the Schools of Richmond, Va.," K. J. **Hoke**, 93 pp.

No. 21, "Vocational Secondary Education," prepared by the Committee on Vocational Education of the National Education Association, 163 pp.

No. 34, "Service Instruction of American Corporations," **Leonhard F. Fuld**, 73 pp.

No. 37, "The Cooperative System of Education, An Account of Cooperative Education as Developed in the College of Engineering, University of Cincinnati," **Clyde William Park**, 48 pp.

1917, No. 9, "Department-store Education, An Account of the Training Methods Developed at the Boston School of Salesmanship under the Direction of Lucinda Wyman Prince," **Helen Rich Norton**, 79 pp.

No. 20, "Work of School Children during Out-of-school Hours," C. D. **Jarvis**, 28 pp.

No. 22, "The Money Value of Education," A. **Caswell Ellis**, 52 pp.

No. 36, "Demand for Vocational Education in the Countries at War," **Anna** T. **Smith**, 16 pp.

1918, No. 19, "Vocational Guidance in Secondary Education," A Report of the Commission on the Reorganization of Secondary Education Appointed by the National Education Association," 29 pp.

No. 24, "Vocational Guidance and the Public Schools," W. **Carson Ryan, Jr.**, 151 pp.

No. 25, "Industrial Education in Wilmington, Del., 102 pp.

1919, No. 6, "A Half-time Mill School," H. W. **Foght**, 23 pp.

No. 24, "Educational Work of the Boy Scouts," **Lorne** W. **Barclay**, 16 pp.

No. 50, The public school system of Memphis, Tenn., Part I, 160 pp. 1. "An Industrial and Social Study of Memphis."

No. 50, The public school system of Memphis, Tenn., Part VI, "Industrial Arts, Home Economics, and Gardening," 48 pp.

No. 52, "Industrial Schools for Delinquents, 1917–1918," prepared under the supervision of H. R. **Bonner**, 53 pp.

No. 70, "Schools and Classes for Feeble-minded Children, 1918," prepared under the supervision of H. R. **Bonner**, 37 pp.

No. 78, "Schools and Classes for the Blind, 1917–1918," prepared under the supervision of H. R. **Bonner**, 23 pp.

No. 79, "Schools for the Deaf, 1917–1918," prepared under the supervision of H. R. **Bonner**, 40 pp.

1921, No. 5, "Part-time Education of Various Types, A Report of the Commission on the Reorganization of Secondary Education, Appointed by the National Education Association," 22 pp.

No. 41, "Educational Work of the Boy Scouts," **Lorne** W. **Barclay**, 10 pp.

No. 43, "Business Training and Commercial Education," **Glen Levin Swiggett**, 17 pp.

No. 46, "Educational Work of the Girl Scouts," **Louise Stevens Bryant**, 14 pp.

# APPENDIX G

## A LIST OF AVAILABLE BULLETINS OF THE FEDERAL BOARD FOR VOCATIONAL EDUCATION (WASHINGTON, D. C.) OF VALUE TO GUIDANCE DIRECTORS AND ADVISERS

No. 31 (Trade and Industrial Series, No. 6), "Training Courses in Safety and Hygiene in the Building Trades."
No. 38 (Trade and Industrial Series, No. 8), "General Mining," on sale by Superintendent of Documents, Government Printing Office, 15 cents per copy.
No. 43 (Employment Management Series, No. 8), "The Labor Audit, A Method of Industrial Investigation."
No. 45 (Employment Management Series, No. 3), "Job Specifications."
No. 46 (Employment Management Series, No. 6), "The Turnover of Labor."
No. 47 (Employment Management Series No. 7), "Industrial Accidents and Their Prevention."
No. 48 (Employment Management Series, No. 4), "Employment Management and Industrial Training."
No. 49 (Employment Management Series, No. 2), "The Selection and Placement of Employees."
No. 50 (Employment Management Series, No. 1), "Employment Management: Its Rise and Scope."
No. 51 (Employment Management Series, No. 9), "Bibliography of Employment Management."
No. 52 (Trade and Industrial Series, No. 13), "Theory and Practice of the Machinist's Trade," on sale by Superintendent of Documents, Government Printing Office, 10 cents per copy.
No. 54 (Commercial Education Series, No. 4), "Survey of Junior Commercial Occupations."
No. 55 (Trade and Industrial Series, No. 14), "Compulsory Part-time School Attendance Laws."
No. 57 (Industrial Rehabilitation Series, No. 1), "Industrial Rehabilitation, A Statement of Policies to Be Observed in the Administration of the Rehabilitation Act."
No. 64 (Industrial Rehabilitation Series, No. 2), "Industrial Rehabilitation, General Administration and Case Procedure."
No. 65 (Home Economics Series, No. 5), "Child Care and Child Welfare," on sale by Superintendent of Documents, Government Printing Office, 35 cents per copy.
No. 67 (Trade and Industrial Series, No. 20), "A Survey and Analysis of the Pottery Industry."
No. 69 (Trade and Industrial Series, No. 21), "An Analysis of the Railway Boilermaker's Trade."

No. 70 (Industrial Rehabilitation Series, No. 3), "Industrial Rehabilitation—Services of Advisement and Cooperation."

No. 76 (Industrial Rehabilitation Series, No. 5), "Vocational Rehabilitation and Workmen's Compensation."

No. 77 (Industrial Rehabilitation Series, No. 6), "Handbook of Information for State Officials Cooperating in the Administration of the Vocational Rehabilitation Act."

No. 78 (Trade and Industrial Series, No. 23), "Part-time Cooperative Courses," on sale by Superintendent of Documents, Government Printing Office, 5 cents per copy.

No. 80 (Vocational Rehabilitation Series, No. 7), "Vocational Rehabilitation—Its Purpose, Scope, and Methods, with Illustrative Cases," on sale by Superintendent of Documents, Government Printing Office, 10 cents per copy.

No. 85 (Trade and Industrial Series, No. 24), "Program for Training Part-time School Teachers: Organization and Content of a Training Program to Prepare Teachers for Effective Service in Part-time Schools," on sale by Superintendent of Documents, Government Printing Office, 5 cents per copy.

No. 86 (Home Economics Series, No. 8), "The Health of the Family, A Program for the Study of Personal, Home and Community Health Problems," on sale by Superintendent of Documents, Government Printing Office, 25 cents per copy.

No. 87 (Trade and Industrial Series, No. 25), "Apprentice Education—A Survey of Part-time Education and Other Forms of Extension Training in Their Relation to Apprenticeship in the United States," on sale by Superintendent of Documents, Government Printing Office, 55 cents per copy.

Report of Proceedings of the First National Conference on Vocational Rehabilitation of Persons Disabled in Industry or Otherwise, St. Louis, Mo., May 15, 16, 17, 1922.

"Apprentice Education in the Construction Industry," Trade and Industrial Series, No. 26), Superintendent of Documents, Government Printing Office, price, 10 cents.

# APPENDIX II

## A LIST OF MENTAL TESTS

### A. GROUP INTELLIGENCE TESTS

*Army Alpha Test* (Army Beta for Illiterates and Foreigners).

Reference: Army Mental Tests, Methods, Typical Results, and Practical Application, Washington, D. C., November, 1918.

Address: Division of Psychology Medical Department, War Department, Washington, D. C.

Consists of the following parts: oral directions, arithmetical reasoning, practical judgment, synonym-antonym, disarranged sentences, number series completion, analogies, and information. Answers are given by checking, underlining, or crossing out. The test is given in 50 minutes, and scoring is objective. Extensive use has been made of this test in high schools and colleges.

*B. U. Intelligence Test.*

Address: Boston University, Boston, Mass.

Consists of five tests on common arithmetic operations, construction of sentences from related words, words of opposite and similar meaning, and sentence completion. For any grade.

CHAPMAN, DR. J. C. and WELLES, J. B., *Junior and Senior High School Classification Test*, published by Dobson-Evans Company, Columbus, Ohio.

Consists of questions in arithmetical reasoning, general information in history, politics and current events, and on opposites. Tentative norms are given but test lacks standardization.

COLVIN, S. S., *Brown University Psychological Tests.*

In four series I, II, III, IV; two groups of interchangeable tests, the groups differing only in one type of questions (reasoning from given relations) and covering sentence completion, vocabulary test (for intellectual honesty), words of opposite meaning, comprehension of word relations, and mathematical reasoning from relations given.

DEARBORN, W. F., *Group Test of Intelligence*, Series 11, published by J. B. Lippincott Company, Philadelphia, Pa.

A group of ten tests on Picture Sequences, Word Sequences, Form Completion, Opposite Completion, Memory Ladders, Picture Symbols, Mazes, Disarranged Proverbs, Faulty Pictures, and Number Problems. The tests are applicable to Grades 4 to 9. Time about 75 minutes; scoring objective. Very important feature is that it minimizes the language element.

FREEMAN, F. N. and RUGG, H. O., *The Chicago Group Intelligence Test.*

Address: University of Chicago Book Store, Chicago, Ill.

This is a test on opposites, missing steps in Series, Proverbs, Analogies, and Best Reasons.

FERGUSON, *A Series of Form Boards.*

Reference: "Journal of Experimental Psychology," February, 1920.

For all grades through college.

HAGGERTY, M. E., *Intelligence Examination*, Delta 2, for Grades 3 to 9, published by World Book Company, Yonkers, N. Y.

A group test for measuring intelligence. Devised by the Virginia Education Commission and used in the mental survey of schools in Virginia. It consists of six exercises, as follows: sentence reading, arithmetical problems, picture completion, synonym-antonym, practical judgment, and information. The test requires about 30 minutes and can be scored rapidly.

Price $1.50 for package of 25 booklets. Manual of directions 35 cents. Scoring key 10 cents.

HOLLEY, C. L., *Holley Sentence Vocabulary Scale*, published by Bureau of Educational Research, University of Illinois, Urbana, Ill.

A test based upon the Terman-Stanford-Binet Vocabulary. The words of this vocabulary are put into sentences, the last word of each sentence being found among four words at the right. Pupils are asked to underscore the proper words to complete the sentences.

Series 3B is used for Grades 7 to 12. Time, 20 to 30 minutes for testing and 2 minutes per paper for scoring.

Price, including complete directions and score sheets, 75 cents per hundred, postage extra.

KELLEY, F. J., *A Constructive Ability Test.*

Address: C. H. Stoelting Company, Chicago, Ill.

KENT, *Geometrical and Colored Picture-puzzles.*

Address: C. H. Stoelting Co., Chicago, Ill.

MYERS, C. E. and MYERS, G. C., *The Myers Mental Measure.*

Reference: MYERS, C. E. and MYERS, G. C., "A Group Intelligence Test," *School and Society*, x, 355–360, published by the Sentinel, Carlyle, Pa., Sept. 20, 1919.

A folder containing a direction test, a picture completion test, and two common-element tests. Pupils respond by drawing or checking in response to oral instructions. Devised as an aid in classification and is applicable to all school ages.

MILLER, W. S., *Miller Mental Ability Test*, published by World Book Company, Yonkers, N. Y., 1921.

Purpose: To measure general ability, the results to be used for classifying pupils and to predict success. Range: Grades 7 to 12.

The test is made up of three parts, Part 1 being a combination of the disarranged sentence test and the directions test. The items in this test are arranged in order of difficulty. Part 2 or Test II, as it is called, is a controlled association test, which also serves as a vocabulary test, of 200 words, arranged approximately in order of difficulty. Test III is a modification of the mixed-relations or analogies test.

Price: $1 for 25 examination booklets including key, percentile graphs, and age-graphs score sheet. Manual of directions, 20 cents. Specimen set, 25 cents.

New York Board of Charities, 24 *Standardized Mental Tests.*

Address: C. H. Stoelting Company, Chicago, Ill.

**Otis, Arthur S. L.**, *Otis Group Intelligence Scale.*

Reference: Otis, A. S.: "An Absolute Point Scale for the Group Measurement of Intelligence," *Journal of Educational Psychology*, 1918, pp. 239–261 and 333–348, published by World Book Company, Yonkers, N. Y.

An absolute point scale, similar to the Army Tests, in forms A and B, each consisting of 10 tests. These are following directions, opposites, disarranged sentences, proverbs, arithmetic, geometric figures, analogies, similarities, narrative completion, and memory. Suitable for Grades 6 to 12. Time, about one hour. Scored at rate of 10 an hour.

| Prices: | | |
|---|---|---|
| | 25 Examination Booklets, either form | $1.50 |
| | Manual of Directions | 0.25 |
| | Examiners Key | 0.25 |

**Otis, Arthur S.**, *Otis Self-administering Tests of Mental Ability*, Higher Examination, published by The World Book Company, Yonkers, N. Y., 1922.

Purpose: To measure general mental ability, the results to be used as administrative needs may determine.

Range: Grades 9 to 12.

These tests possess four rather important features: (1) Self-administration, so that the examiner has but to give a few initial instructions; (2) ease of scoring, which reduces the time of scoring a paper to about 45 seconds; (3) flexible time limit; (4) variety of test material, insuring a more comprehensive examination. There are two forms of the tests, alike in difficulty but different in content. Each test consists of 75 questions or problems, including opposites, arithmetic, geometry, analogies, proverbs, etc.

Price: $1 for 25 booklets, including one manual of directions, one key, and one record cheet.

**Pintner, R.**, *The Mental Survey Tests.*

Address: C. H. Stoelting Company, Chicago, Ill.

**Pintner, R. and Patterson, D. G.**, *A Scale of Performance Tests.*

Address: C. H. Stoelting Company, Chicago, Ill.

**Pressey, S. L. and Pressey, L. W.**, *Indiana Group Point Scale.*

Reference: "A Group Scale for Measuring General Intelligence, with First Results from 1,000 School Children," *Journal of Applied Psychology*, vol. ii, September, 1918, pp. 250–269.

Address: Dr. S. L. Pressey, University of Indiana.

An examination composed of ten tests of 20 items each, the tests being applicable from the third grade through the high school. Tests include rote memory, logical selection, arithmetic, opposites, logical memory, work completion, moral classification, dissected sentences, practical information, and analogies. Time for testing, 45 minutes; for scoring, two minutes per paper. Scoring is objective.

**Pressey, S. L. and L. W.**, *Mental Survey Scale.*

Address: University of Indiana, Bloomington, Ind.

Cross-out tests for Grades 4 to 12.

**Roback, A. A.**, *Roback Mentality Tests.*

For superior adults No. 37093.

Address: C. H. Stoelting Company, Chicago, Ill., 1921.

Taylor, C. K., *Intelligence Tests*, published by The Academy Press, Carteret Place, Orange, N. J., 1922.

Six simple tests for use with individuals or groups.

Terman, Lewis M., *Terman's Group Test of Mental Ability*, published by The World Book Company, Yonkers, N. Y., 1920.

Purpose: By means of a group test to obtain a measure of intelligence for purposes of classification, vocational guidance, and other administrative needs.

Range: Grades 7 to 12.

Price: $1.55 for 25 tests, including manual, key, and record sheet.

Theisen and Fleming, *Classification Test*, published by Bureau of Publications, Teachers College, New York.

Reference: "Group Intelligence Tests," *Journal of Educational Research.*

Based upon the Army Alpha Test. Given in 50 minutes and scored at rate of 15 per hour.

Thorndike, E. L., *Thorndike Intelligence Examination for High School Graduates*, published by Bureau of Publications, Teachers College, New York, 1919.

The examination consists of three parts, each having 15 alternative forms of equivalent difficulty. Part I has 13 tests and requires one hour for the two forms to be given; Part II has eight tests, one form to be given in about 30 minutes. The whole examination of two and one-half hours gives a reliable measure of the student's intelligence. The tests cover a wide range of functions.

Thurstone, L. L., *Psychological Examination for College Freshmen and High School Seniors.*

Address: Author, Carnegie Institute of Technology, Pittsburgh, Pa.

This is Test IV of a series of six, and contains 168 problems arranged in cycles. Each cycle includes problems of practical information, relations, sentence completion, true-false statements, proverbs, and number relations. Time limit 30 minutes.

Part A and Part B follow the same general plan, but contain 100 problems each. Time limit 20 minutes.

Thurstone, L. L., *Thurstone Vocational Guidance Tests: Algebra*, published by The World Book Company, Yonkers, N. Y., 1919 and 1922.

Purpose: To diagnose a pupil's ability and to predict his chances of success in the field of engineering.

Range: For the twelfth grade and for college freshmen.

Price: $1 for a package of 25 tests, including a key and a record sheet. Manual of directions, 20 cents.

Thurstone, L. L., *Thurstone Vocational Guidance Tests: Technical Information Test*, published by The World Book Company, Yonkers, N. Y., 1922.

Purpose: To diagnose a pupil's ability and to predict his chances of success in the field of engineering.

Range: For the twelfth grade and for college freshmen.

Price: $1 for a package of 25 tests, including key and record sheet. Manual of directions, 20 cents.

Thurstone, L. L., *Thurstone Vocational Guidance Tests: Geometry*, published by The World Book Company, Yonkers, N. Y., 1919 and 1922.

Purpose: To diagnose a pupil's ability and to predict his chances of success in the field of engineering.

Range: For the twelfth grade and for college freshmen.

Price: $1 for a package of 25 tests, including a record sheet. There is no key for this test. Manual of directions, 20 cents.

THURSTONE, L. L., *Thurstone Vocational Guidance Tests: Physics*, published by The World Book Company, Yonkers, N. Y., 1919 and 1922.

Purpose: To diagnose a pupil's ability and to predict his chances of success in the field of engineering.

Range: For the twelfth grade and college freshmen.

The Physics Test differs from the ordinary examination in the subject only in that an attempt has been made to appeal to the engineering interests of the pupil.

Price: $1 per package of 25 tests, including key and record sheet. Manual of directions, 20 cents.

TRABUE, M. A., *The Mentimeter.*

Reference: "Measure Your Mind," TRABUE and STOCKBRIDGE.

Address: Doubleday Page and Company, New York, 1920.

Consists of eight tests on Pictorial Absurdities, Maze Threading Geometric Figures, Opposites, Reading Directions, Sentence Completion, Arithmetical Reasoning, and Range of Information. Can be given to all grades and in college.

WASHBURNE, C. W., "Classified Scales for Measuring Intelligence."

Reference: *Journal of Educational Psychology*, vol. x, September, 1919.

The author has classified the tests of the Stanford Revision of the Binet-Simon Scale according to the predominant functions used in passing them. He claims that the scale now shows which mental functions are above or below normal and that it is therefore diagnostic.

WOODWORTH and WELLS, J. B., *Association Tests.*

Address: C. H. Stoelting Company, Chicago, Ill.

For elementary and secondary schools.

YERKES, R. H., *National Intelligence Tests*, published by The World Book Company, Yonkers, N. Y.

Devised by a committee of the National Research Council. Consists of two short scales, A and B, each including five tests. Either scale requires approximately 30 minutes, either scale may be used alone, but reexamination by the second scale after an interval of at least a day is recommended. A number of alternative forms of the tests will be available.

### B. INDIVIDUAL TESTS

Ellis Island Tests, "The Mentality of the Arriving Immigrant."

*Public Health Bull. No.* 90, Government Printing Office, Washington, D. C., October, 1917.

HUEY, EDMUND B., *Revision Binet Test for Intelligence Age.*

Reference: HUEY, DR., "Syllabus for the Clinical Examination of Children."

Address: Warwick and York, Baltimore, Md.

PORTEUS, S. D. and HILL, *Revision of the Binet-Simon Measuring Scale for Intelligence.*

Address: C. H. Stoelting Company, Chicago, Ill.

TERMAN, L. M., *Measurement of Intelligence*, an explanation of and a complete guide for the use of the Standard Revision and Extension of the Binet-Simon Intelligence Scale, Houghton Mifflin Company, Boston, Mass., 1916.

Printed material needed in the tests, including the record booklets, may be secured from above publishers.

A series of tests for years 3 to 14 inclusive and for "average" and "superior" adults, based on the Binet-Simond Tests, but considered more accurate in measuring intelligence. Requires from one to two hours for administration.

### C. SPECIAL TESTS

DOWNEY, JUNE E., *Will Temperament—Group Test.*

Reference: "The Will Profile," *Bull. No.* 3, Department of Psychology, University of Wyoming, Laramie, Wyo.

A directions type test for measuring certain elements of the will, adapted to groups. It consists of nine tasks to be performed, the scoring in most of which is on the time basis. The resultant score is shown by a graph with the various elements of the will as tenacity, assurance, motor impulsion, etc., for abscissas and with numbers 1 to 10 for ordinates.

HOLLINGWORTH, H. L., *Vocational Psychology Tests.*

Address: C. H. Stoelting Company, Chicago, Ill.

KELLEY, T. L., "Interest Tests," *Educational Guidance*, pp. 40–45, *Contributions to Education, No.* 7, published by Bureau of Publications, Teachers College, New York, 1914.

A set of ten exercises devised "to cover impartially all the ordinary interests of a pupil." The tests are valuable in diagnostic and prognostic work. Tables are given to aid in the grading of the test results.

PORTEUS, S. D., *Tests for Mental Deficiency*, Vineland Revision.

Address: C. H. Stoelting Company, Chicago, Ill.

RUGG, H. O., *A Rating Scale for Judging High School or College Students.*

Address: University of Chicago Book Store, Chicago, Ill.

Form A is a subjective rating scale for the following qualities:

1. Ability to learn—to assimilate new ideas.
2. Industry and attitude toward school work.
3. Leadership.
4. Team work.
5. Personal and social.

Under each of these divisions the pupil rates himself by qualitative answers to certain questions.

Form B is a numerical rating subjective scale, based on same qualities as A. This is scored by the teacher by direct comparison of pupils and may be used together with A by the principal for prognostic purposes.

WALLIN, J. E. W., *Test for Measuring Rate of Mental Growth and Improvement*

Address: C. H. Stoelting Company, Chicago, Ill.

WOOLEY, H. T., FISCHER, *Cincinnati Vocational Bureau Tests.*

Address: C. H. Stoelting Company, Chicago, Ill.

# APPENDIX I

## A SUGGESTED READING LIST ON SPECIAL ABILITIES

AYER, F. C., *The Psychology of Drawing*, Warwick and York, Baltimore, Md., 1916.

BRONNER, A. F., *The Psychology of Special Abilities and Disabilities*, The Bobbs-Merrill Company, Indianapolis, Ind., 1917.

BURT, CYRIL, *The Distribution and Relations of Educational Abilities*, publication No. 1868, London City Council, P. S. King and Son, Great Smith Street, Westminster, S. W., London, England, 93 pp.

BUCKNER, C. A., *Educational Diagnosis of Individual Pupils*, Teachers College, Columbia University, New York, 1919, 93 pp.

CODY, S., *Commercial Tests and How to Use Them*, The World Book Company, Yonkers, N. Y., 1919, 216 pp.

COY, S. GENEVIEVE LENORE, "The Interests, Abilities, and Achievements of a Special Class for Gifted Children," *Contributions to Education, No.* 131, Teachers College, Columbia University, New York, 1923, tables, diagrams, 194 pp.

EARLE, E. L., *The Inheritance of the Ability of Learning to Spell*, Columbia University, New York, 1903.

HOLLINGWORTH, L. S., *The Psychology of Special Disability in Spelling*, Teachers College, Columbia University, 1918.

KORNHAUSER, A. W. and KINGSBURY, F. A., *Psychological Tests in Business*, University of Chicago, Chicago, Ill., 1924.

MANUEL, H. T., *A Study of Talent in Drawing*, Public School Publishing Company, Bloomington, Ill., 1919.

STENQUIST, J., "Measurements of Mechanical Ability," *Contribution to Education, No.* 130, Teachers College, Columbia University, size 6¼ by 9½ in., 102 pp., illustrated.

THURSTONE, DR. L. L., *Public Personnel Studies*, vol. i, No. 1, a comparative study of clerical tests, Institute for Government Research, Washington, D. C.

ROGERS, HERBERT WESLEY, *Some Empirical Tests in Vocational Selection*, Columbia University, New York, 1922, 48 pp., $.75.

STEACY, FREDERICK W., *The Interrelations of Mental Abilities*, Teachers College, Columbia University, 1919, 77 pp.

SEASHORE, C., *Measure of Musical Talent*, Columbia Graphophone Company, New York, 1919.

SEASHORE, CARL EMIL, *The Psychology of Musical Talent*, Silver, Burdett & Company, New York, 1919.

STANTON, H. M., *The Inheritance of Special Musical Capacities*, University of Iowa Studies, 8, Psychological Monographs, 1922.

WEGLEIN, D. E., *The Correlation of Abilities of High School Pupils*, Johns Hopkins University, 1917.

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